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EIGHTH ANNUAL REPORT

OF THE

BUREAU OF STATISTICS OF LABOR.

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Commonwealth of Massachusetts.

OFFICE OF THE BUREAU OF STATISTICS OF LABOR
33 PEMBERTON SQUARE, BOSTON, March 1, 1877.

Hon. JOHN D. LONG, *Speaker of the House of Representatives.*

SIR:—I have the honor to present to the Legislature the Eighth Annual Report of the Bureau of Statistics on the Subject of Labor.

The Bureau has been engaged during the past year upon the completion of the census of 1875 and upon this Report, the principal labor, however, having been upon the census.

With the exception of Part VI., the various features of this Report need no comment. Part VI., "Massachusetts Manufactories," presents a great deal of evidence relating to means of escape in case of fire, of particular value at this time when a bill providing for the inspection of factories, etc., is before the Legislature.

In the introduction to the Seventh Annual Report of this Bureau the following language occurs: "We can not refrain from urging upon the Legislature the necessity of bringing under one organization the gathering and preparation of all statistics relating in any way to the condition of the people." I wish emphatically to repeat this recommendation; for, while firmly believing that the State can not and ought not to do away with the distinctive work of this office, I see no reason why it can not be as fully pursued in connection with other statistical work as under a separate department. The value and importance of a bureau of statistics are fully acknowledged by all, but why the State should keep up distinctive bureaus, engaged in statistical labors, is difficult to understand. This Bureau should not be abolished, however, till another depart-

ment is formed on a scale broad enough to preserve its peculiar features and still be capable of serving the interests of the State in all required directions so far as social and industrial statistics are concerned. The value of the reports emanating from the various state offices increases from year to year, yet it can not be denied, as indicated in Parts IV. and V. of this document, that the "census developed the necessity of more uniformity in the general statistics of the State and in the methods of keeping the records of public institutions." And that "a central control of all statistical matters would secure simplification, avoid the duplication of work, and ensure uniformity and intimacy of connection in the presentation of facts by the several departments whose custom it is to report statistical information." *

I earnestly hope the present Legislature will take steps to secure results so desirable and so practically in the interests not only of economy, but of efficiency.

The completeness of the census of 1875, especially in all matters pertaining to wages, cost of material, value of products, running time of manufactories, classification of labor, hours employed, day and piece work, etc., etc., and the full presentations in this volume relating to fire escapes and the employment of people in different stories, would seem to indicate that no more investigations in the same directions need be undertaken for some years at least, although frequent reports upon the value of products and materials and upon wages would be exceedingly valuable. The grand desideratum, however, in statistical work is uniformity of classification and presentation, after, of course, accurate original entries. Without these, comparison becomes guess-work, and the labor and expense of the collection are lost in the labor and expense of the classification of facts.

The Bureau can not solve the labor question, for it is not solvable; it has contributed and can contribute much in the way of general progress. The labor question, like the social problem, must be content to grow towards a higher condition along with the universal progress of education and broadened civilization. There is no panacea. Intelligence, resulting from industrial and intellectual education, will produce grand

* Address of Gov. Rice, January, 1877.

results in the amelioration of unfavorable conditions. The enactment of laws protecting the interests of the laborer, protecting his person from accidents, his rights to the schools for his children,—in fact, to drive his children out of manufacturing establishments and into the schools,—fostering plans for his securing cheap and comfortable homes, as contemplated by the Philadelphia system now before the Legislature;—these, with other measures, are all great helps, but not solutions; they are all elevating, but not concluding influences. Industrial arbitration and industrial co-partnerships and co-operation are smoothing down the asperities which unfortunately exist between labor and capital, when ignorance on either side insists on a conflict between the two, and are fast convincing men that labor and capital are in a large degree interchangeable terms, and each in a separate capacity, dependent upon the other. One great consolation comes in to modify statements made upon platforms, and that is, that the struggle is an old one, that its history shows the social structure to be constantly on the brink of destruction, and that it has, on the contrary, as constantly risen to a higher and better condition. The resolutions passed in 1845 and thereabouts, in this State, as shown in Mr. McNeill's interesting history of co-operation in Massachusetts (Part II., this volume), have been repeated again and again every year since then, and their substance was often proclaimed during the centuries before; and yet conditions constantly improve, as shown in the admirable paper by Col. T. W. Clarke, on the motive power of Massachusetts (Part III.), and the relations of laborer and capitalist are more equitably adjusted, as the chapter on arbitration assures us, and as the constant announcements in the press of the settlement of difficulties by boards clearly prove. These desirable results are attained not by unhappy and unfortunate agitations, not by strikes and their consequent demoralizing influences, but by all the contributions to the sum of the intelligence of the laborer and the capitalist, and any means which the Legislature can adopt which will add to the information of the people on subjects which concern their daily lives are of untold value, and surely return to the government a hundred-fold. To popularize statistics, to put them

before the masses in a way which shall attract, and yet not deceive, is a work every government which cares for its future stability should encourage and enlarge.

The plans of the Bureau for the ensuing year are in conformity with what has just been said, and the Ninth Report will contain much valuable matter drawn from the family schedules of the census and other sources, regarding the nativity of the people employed in the various pursuits, and other matter which not only interests and instructs but tends to attract the mind to the investigation of conditions with the view to their improvement.

I wish to acknowledge the continued valuable services of Mr. Charles F. Pidgin, chief clerk, and of Mr. Oren W. Weaver. The labors of these gentlemen have been of the greatest value in the vast work of the Bureau the past year. F. W. Draper, M. D., for his able analysis of returns relating to diseased conditions, Part IV., and Col. T. W. Clarke, for the intelligent chapter on motive power, Part III., deserve the warmest thanks. Acknowledgments to other gentlemen who have assisted in the preparation of this report have been made in the parts prepared by them.

Very respectfully, your obedient servant,

CARROLL D. WRIGHT, *Chief.*

PART I.

INDUSTRIAL ARBITRATION AND CONCILIATION.

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INDUSTRIAL ARBITRATION AND CONCILIATION.

The settlement of disputes arising between employers and employed by such means as will ensure the peaceful co-operation of both parties, is a result which should be hailed by all as a step in advance, and indicates, whenever tried, a desire to adjust those questions which have been so fruitful of strikes and consequent distress.

Manufacturers combine, dealers combine, operatives combine, and the results of all such combinations usually work injuriously to the parties engaged; and yet the right of grocery dealers to agree, in association, on prices for necessary articles of food, or of railroad officials to say what wage they will pay to their engineers, or of the engineers to hold their labor at a higher rate, or for the weavers in a mill to assert, after consultation, that they will charge for their labor, which is theirs to sell, after such a date, so much per yard or cut, can not be questioned as a right; but when the welfare of many is concerned in arbitrary action, and when prices are forced by either side, so much temper enters into the question that the principle involved is often lost sight of and the dispute becomes one of will, and the consequences are usually the reverse of those sought. The age of lock-outs and strikes is fast passing away and the rule of reason is rapidly asserting itself,—and when it shall hold sway, capital and labor will learn that their interests are identical and not antagonistic. Much must be learned and much unlearned on each side before the two interests can be brought to the full acknowledgment of each other's rights and duties, and any information

which will tend in any degree to the establishment of better relations between the employer and the employed should be freely circulated.

Arbitration in industrial matters is one of the highest and broadest features of co-operation, and at the same time one of the simplest methods for restoring harmony where conflict exists. It consists in the reference of all difficulties to a board consisting of members chosen by the employers and by the employed in equal numbers, the decision of the board, after hearing, under established rules, to be binding on all parties. This system, under various modifications, has worked excellently well in England, but has been tried only to a limited extent in this country, and this principally in Lynn.

With a view to giving the people of Massachusetts the facts regarding this important subject, we have had prepared not only a *résumé* of the history and results of arbitration in England, but have investigated the subject thoroughly in this State.

Alsager Hay Hill, LL. B., editor of "The Labour News," London, Eng., has made the following report to the Bureau on the rise, growth and present status of arbitration in England in regard to the settling of disputes between employer and employed.

Arbitration in England.

To the Chief of the Bureau of Statistics of Labor, Boston, Mass., U. S. A.

Sir:—In reply to your request for particulars relating to the "rise, growth, and present status of arbitration in England as regards the settling of matters in dispute between employers and employed," I beg to report: According to Mr. Henry Crompton, whose recent work on industrial conciliation [London: H. S. King & Co.] has largely assisted me in the compilation of the present statement, the first established system of arbitration was seen in France at the beginning of the present century, and was due to the general impulse given by the French Revolution and to the destruction of class distinction. Certain legal tribunals were then created by law, called the "conseils des prudhommes." They were composed of employers and employed, and were authorized to determine disputes that might arise between capital and labor; but they had no jurisdiction which enabled them to settle disputes as to future wages or prices, or to fix terms of employment. In Belgium, moreover, these courts seem to have had a semi-criminal jurisdic-

tion to punish misconduct by the infliction of a fine, like the late master and servants' act (30 and 31 Vict., c. 141).

Probably arbitration in England owes its origin to these "conseils des prudhommes." Throughout the century disputes have been settled between employers and employed by resort to arbitration, and in some trades, as, for example, in the pottery trade, the practice arose of inserting an arbitration clause in labor contracts.

About 1850 the principle of arbitration was advocated as the best means of ensuring peace between labor and capital. Prior to 1860 the condition of things in the hosiery trade at Nottingham was one of war between employers and employed. In 1860 there were three strikes in one branch of the trade, one of which lasted eleven weeks. A general lock-out was proposed, but, on the suggestion of Mr. Mundella, three employers met a dozen leaders of the trades-unions.

They consulted with the men and told them that the existing plan was a bad one, and that the workmen took every advantage of the masters when there was a demand for them, and the masters took every advantage of the men when trade was bad.

At first both masters and men viewed the new proposals with suspicion, but at last a board of arbitration and conciliation was agreed to. It was further agreed to refer all questions in dispute to the board; and that the board should be composed of an equal number of manufacturers and workmen, both to be chosen annually by their respective bodies. The chairman was to be elected by the meeting, to have a vote, and a casting vote when necessary. The casting vote does not seem to have been a satisfactory arrangement, and latterly the chairman has not voted at all. The chairman being always an employer, it has been thought undesirable that, where there is an equal vote, the decision should be given by an employer. The board has, therefore, come to a conclusion that in such an event there shall be a reference to some arbitrator to be appointed for the occasion. The proceedings of this board are very informal and not like a court, but the masters and men sit around a table, the men interspersed with the masters. Each side has its secretary. There is, in connection with this board, a committee of inquiry, which consists of four members of the board,—two employers and two operatives. If a dispute arises, it comes in the first instance before the two secretaries of the board. If they fail to adjust the difficulty, it is brought before the committee of inquiry, but they have no power to make an award. They can only settle the difference amicably by the consent of both sides. In one of the rules it is laid down distinctly that neither board nor committee will entertain any application from men on strike. The condition of the board's action is that the men remain at their work. Every case has to pass through

the hands, first, of the secretaries and then of the committee, before it comes to the last of all,—the board.

There is a similar board for the Leicester hosiery trade. It dates from 1868. The board is composed of nine manufacturers, nine workmen and six middlemen; three of the latter being chosen by the masters and three by the men. There is a standing referee appointed, whose decision is final in the event of an equal vote; and the committee of inquiry consists of two employers, two workmen and one middleman.

At Derby a similar board has been established, which works satisfactorily.

In the Nottingham lace trade a board exists, similar to that in the Nottingham hosiery trade. This board is composed of twelve employers and twelve workmen. There are three different branches of the trade, and the board is a representation of these three branches. Six masters and six men represent one branch; the other two branches being represented each by three masters and three men. There are three committees of inquiry, each composed of three masters and three men,—one committee for each branch of trade. Every question arising out of one particular branch of the trade comes before the corresponding committee, and the matter must be considered by all the members of that committee before it comes before the board. The committee have power to make binding awards, but only with the consent of both sides, and not in cases where an award would affect others outside that branch. As in the Leicester board, there is a standing referee appointed annually, who is not an umpire to preside over the arbitration, but simply a referee, who is appealed to in case of an equal vote, and whose decision is always final. This board seems to have worked very successfully. The constitution and rules will be found at the end of Mr. Crompton's work on industrial conciliation. And the same writer says: "The representative character of the board appears to have two results,—one of satisfying the men that their case has been decided by men who really understand the facts; the other, that the work of conciliation is done by the parties actually concerned and not by strangers. The plan reduces the interference of strangers to a minimum, which is the very essence and principal merit of industrial conciliation."

It was not, according to Mr. Crompton, until 1860* that any permanent system or board of arbitration came into actual operation.

The two persons who have been most instrumental in this work, and whose names will long be remembered in connection with it,

* For history of early attempts at arbitration in the silk and printing trades, see Crompton's Industrial Conciliation.

are Mr. A. J. Mundella, M. P., and Mr. Rupert Kettle, Q. C. Mr. Kettle, a lawyer and judge, naturally approached the subject from a legal point of view. Mr. Mundella, a manufacturer and himself sprung from the working classes, went straight to the practical and moral end implied by the word conciliation. Mr. Kettle's scheme was based on a simple yet admirable application of the common law. A code of working rules was drawn up by the representatives of employers and employed. These rules were posted up in the workshops, and a copy was given to every workman engaged. The working rules, thus brought to the notice of the parties, became a contract, binding between each employer and every workman engaged by him; such a contract could be enforced at law.

The following is a brief account of the rise and progress of the system of arbitration in the most important of the British industries:—

Manufactured Iron Trade.

The North of England iron trade was started at Middleborough about the year 1860. During the next ten years it developed enormously, and a large number of operatives were collected from various parts of England. Some came from iron works in other parts, many from other trades and a considerable number were Irish laborers. The history of the trade, says Mr. Crompton, was one of endless disputes, of deeply ingrained suspicion on the part of the operatives, of want of sympathy and understanding on the side of the masters. Strikes were of frequent occurrence. In 1866, the works were stopped for four months. The men had refused to submit to a reduction of wages, but were in the end forced to accept the masters' terms. "From that time to the end of 1868," says Mr. Samuelson, M. P., in a paper read before the Iron Trade Association, February, 1876, "repeated reductions in the wages of the men became necessary, and gave rise to feelings of resentment which rendered it more than probable that any increase in the demand for iron would be the signal for peremptory demands on the part of the workmen, tending to a renewal of the confusion of previous years and the destruction of the prosperity which all might otherwise hope to share." In 1869 the idea of bringing about a conference between the representatives of employers and employed arose, not only with a view of settling the wages dispute, but of establishing a permanent board like that in the Nottingham trades. March 1, 1869, after a preliminary meeting of the men, a conference was held, after which rules were drawn up and the board came into existence and has flourished ever since. At the beginning of 1876, the board represented thirty-five iron works and more than

thirteen thousand operatives subscribed to the board. Besides these, large numbers of men are always connected with iron works who do not subscribe, but are nevertheless dependent upon its arrangements for employment, and who would be thrown out of work if a strike were to occur.

The works represented by the board contain 1,913 puddling furnaces out of 2,136,—the number in the whole district. The board has a representative constitution, each "works" sending two representatives, an employer and an operative; the latter being chosen by ballot for one year, but eligible for re-election. A president, a vice-president and two secretaries are chosen by the board for a year. They are not entitled to vote; but the "works" for which either was elected is entitled to nominate another representative in his stead. If the employer representative of any "works" happens to be absent, the corresponding operative representative is not allowed to vote. A standing committee, consisting of five employers and five operatives, the president and vice-president, is appointed by the board, and is exactly analogous to the committee of inquiry in the lace and hosiery trades. Its functions are defined by Rule 11: "All questions shall be in the first instance referred to the standing committee, who shall investigate and endeavor to settle the matters so referred to it, but shall have no power to make an award except by the consent of the parties." Failing settlement by the committee, it is at once referred to the board. In 1875 the committee settled more than forty disputes. Its decisions, or rather its recommendations, are generally accepted: appeal to the board is exceptional. If the board fails to agree, it appoints an independent referee to settle the dispute. There is no standing referee as in the lace trade.

Lately, disputed questions have been referred to two arbitrators, one chosen by the employers and the other by the men, an umpire being named whose decision is final. In the event of the arbitrators being unable to agree, each of them has to state his view to the umpire. Mr. Crompton is of opinion that there is no advantage in this course, which involves another hearing, further delay and increased expense. That plan would be best, he adds, by which the dispute was settled by one arbitration, and that as short as possible.

It is admitted on all hands that this board has proved a success.

There have been six arbitrations on the general question of wages since the board came into existence.

To quote the printed case laid before the recent arbitrators by the employers: "The board has been in operation since 1869, and during the whole of the intervening period the general district wages regulations have been settled without resort to strikes or lock-outs,

and the employers most readily accord their opinion that, with a few local exceptions, which do not affect the general principle, the operatives, as a body, have been loyal to the rules laid down by the board."

In 1869, 1872 and 1873, large increases of wages were awarded, but eighteen months later wages sank forty-two and one-half per cent. This was effected partly by agreement and partly by award. and, in words of Mr. Crompton, "the men loyally stood to the awards, though they involved such enormous reductions." The last reduction, awarded by the arbitrators without reference to the umpire, was evidently a compromise. The whole proceedings are described as having been characterized by admirable patience and forbearance on both sides. In some of the outlying districts the men resented the decision and refused to work, but their leaders, especially the late Mr. John Kane, insisted on the importance of their keeping faith. In two or three days all the men were at work, quietly, at a reduction of fifty per cent on the wages of 1873.

On the 24th of February, 1876, at the first meeting of the Association of the British Iron Trade, Mr. Samuelson, M. P., read a paper upon the success of the Board of Arbitration and Conciliation in the North of England Manufactured Iron Trade, advocating the establishment of similar boards throughout the trade. He said that "arbitration in a more or less organized form is now accepted in the manufactured iron trade of South Staffordshire, South Wales and Scotland, in the ironstone mines of Cleveland, and in all the principal coal-mining districts of England and Wales."

A resolution moved by Mr. Samuelson was not pressed, but the discussion was indefinitely postponed.

Arbitration in the South Staffordshire Iron Trade.

The success of arbitration in this trade has not been an uninterrupted one. It was formed upon the basis of the two organizations in the district, the South Staffordshire Iron Masters' Association and the local branch of the Iron Workers' Union. The board only represented these associations, but a new South Staffordshire board has since been established. The constitution of this board is not the same as that of the North of England board. It consists simply of twelve masters and twelve operatives, but every "works" joining the board shall, if possible, have a representative of the employers and a representative of the operatives. The board elects a president, not connected with the iron trade, whose duty it is to attend at meetings when questions are brought before the board to be settled, but to take no part in the discussion beyond asking explanations sufficient to guide his judgment. He has not to give an award like

an arbitrator or an umpire, but in the event of an equal vote, he would have to decide then and there by his casting vote. The South Staffordshire board has already accepted the result of an arbitration. Besides the president, there are a chairman and a vice-chairman, who are elected by the board from amongst themselves. Instead of a committee of inquiry, the rules say that "in case of any difference arising at any works, it is intended that it shall be settled by their works' representative; but in case of their failing, it is open to them to refer it to the chairman, vice-chairman and the two secretaries, who may call the board together if they see fit."

The Coal Trade.

Arbitration in the coal trade is now firmly established. As yet, however, no permanent board has been established. When a dispute arises arbitrators are chosen on each side, and an independent man is fixed upon as an umpire. In the Northumberland coal trade, although there is no permanent arbitration board, the masters and men have for some years met together and discussed and settled all questions "of mere local importance affecting individual pits." The committee has no authority to deal with the larger question of wages; nor is there any board which has such authority. The arbitrating board is created for the occasion.

In the Durham coal trade the same system prevails. Great as the fluctuations and difficulties have been, arbitrations in Northumberland and Durham have been successful, and have been loyally adhered to by employers and employed. Arbitration in the coal trade has now become common all over the country, and the refusal to submit to it is regarded as equivalent to a weak case. In one colliery in South Wales, the men complained of the neglect of their own arbitrator and refused to accept his award. There have been successful arbitrations in Ashton-under-Lyne, Oldham, North Staffordshire, Cleveland and the North of England. In South Staffordshire a sliding-scale wage was agreed to after the strike of 1874 by a joint committee of employers and employed. At Radstock there have been two awards. In the South Wales steam-coal collieries the men have remained loyal to a most unfavorable award. At Mold in North Wales, in 1869, there was a formidable riot. Experience in South Yorkshire and North Derbyshire coal trade has not been as yet satisfactory.

It may, however, be stated that a strong wish is manifesting itself among colliers in all parts of the country to settle disputes without recourse to strikes on the one side or lock-outs on the other.

Other Industries.

According to the record of Mr. Crompton, the English working-classes have given the most favorable reception to the proposal for courts and boards of arbitration or conciliation. As far back as 1866, Mr. George Odger introduced the subject of arbitration at a large meeting in Sheffield, and then expressed his opinion that strikes were to the social world what wars were to the political world: they became crimes unless they were prompted by absolute necessity. Where industries are not localized, but, on the contrary, scattered over the country, arbitration arrangements necessarily become more difficult. In the more highly organized of these trades, the question of wages is not so often raised by arbitration, and in some very slight alterations have taken place in a long series of years. The engineers have, as in the case of the nine hours' strike at Newcastle in 1871, so ably recorded by Mr. John Burnett, the secretary of the Amalgamated Engineers, been willing to submit questions in dispute to arbitration, but the great variety of operatives employed in this industry makes the system more difficult to adjust satisfactorily. Mr. John Burnett has, however, expressed his opinion that "a scheme of arbitration might be arranged so as to apply to the various peculiarities of the engineering trade."

The brass workers have made an experiment in arbitration, but it does not seem to have been successful.

In the building trades difficulties arise similar to those in the engineering; up to date no representative board has been created in the metropolis. At Wolverhampton a board was organized by Mr. Kettle in 1865, but its later working has not been altogether satisfactory.

At Wolverhampton, Worcester, Birmingham and the potteries regular conciliation boards have been established, but the meetings do not seem to have been regular enough to ensure thorough efficiency in the working.

At Sheffield the employers did not seem disposed to meet the overtures of the men who, through the carpenters, desired to form a board.

The bricklayers can not be reported as having distinctly pledged themselves to the system of arbitration, but Mr. Coulson, the secretary of the Operative Bricklayers' Society has endeavored to establish boards as opportunities have arisen.

The masons have not as a class shown so strong a desire for arbitration as the other classes of building operatives, and, in the language of Mr. Crompton, "they have a conservative tenacity which tends to prevent them from changing some practices which can not

stand the test of criticism." At Bristol, however, a code of rules has been drawn up between the Masters' Association and the Operative Stone Masons'. One rule provides that "six employers and six operatives act as a standing committee to hear and determine any minor disputes that may arise from time to time as to the intention and working of the rules, and their decision shall be equally binding on both parties, and no suspensions of labor shall take place pending the decision of the conciliation committee."

Among painters, though there is no permanent board in the trade, a code of working rules was established at Manchester in 1870, agreed upon by six operatives and six employers. According to this code there must be six months' notice of any change, which is settled by conciliation, if possible, if not by reference to some arbitrator. At Birmingham, Coventry, Leicester and Nottingham arbitration has also taken place in this branch of trade.

In the potteries a board of conciliation and arbitration has been in existence since 1868 for the china and earthen ware manufactories. The board is established on the model of the Nottingham boards. "The president presides over such meetings of the board as are not convened for the purpose of arbitration; but a standing referee presides over all arbitrations by the board, and his decision is final in the event of an equal vote." Mr. Crompton points out that the advantage of this seems to be that the referee is not called or arbitration attempted until the board has failed to settle by conciliation; in which case there is to be one final arbitration arrived at, if possible, without difference. The award is made subject to a month's notice on either side. The settlement of the prices of labor is, however, for a year.

In the chemical trade of Northumberland and Durham, a board of arbitration and conciliation was established in 1875, but it is of too recent formation for any results to be reported. This board has a by-law specially directed against strikes and lock-outs.

In the boot and shoe trade no board of a formal character has yet been established, but a resolution has been passed at Stafford in support of one in the future. At Leicester, also, steps have been taken recently to form a similar board.

In the textile trades, as far back as 1849, a voluntary court of arbitration was established at Macclesfield between the manufacturers and the weavers in the silk trades. This board, which was called the Macclesfield Silk Trade Board, was composed of twelve manufacturers and twelve weavers, a chairman and secretary, not members of the board. This board lasted for four years, but broke up in consequence of a leading employer refusing to abide by the rules or

the system of fines and coercion, and a strike taking place to compel his subordination to the board.

In the woollen and worsted trades of Yorkshire there have been no boards of arbitration or conciliation, nor has arbitration been resorted to as a means of settling disputes.

In the East Lancashire cotton trade there is no system of arbitration or conciliation, but committees composed of employers and employed are appointed from time to time for the purpose of settling disputes, and they argue the question till one side gives in. Mr. Birtwhistle, the secretary of the East Lancashire Amalgamated Weavers' Association, is of opinion they ultimately will have to resort to arbitration.

In the printing trade a court of arbitration was established in 1853, but the court broke up, because the men, while accepting the award as a decision in an actual dispute, refused to accept it as a decision binding in all other cases arising out of past contracts and involving similar questions.

In the Typographical Trades Union, arbitration has been suggested, but not yet adopted.

At Manchester, a question in dispute has been settled, however, in conference between the masters and men in the printing trade.

Among unskilled laborers, with the exception of the laborers who are represented on the Birmingham board in the building trade, no settled form of arbitration has as yet been arranged, and until this large class is more thoroughly organized within its own lines by union, such arbitration will be difficult, if not indeed impossible.

Among agricultural laborers, into whose ranks the spirit of organization is fast infusing itself, no arbitration has yet taken place; but Mr. Howard Evans, editor of the "English Laborer," Mr. Crompton and others have written in favor of the adoption of the system in future disputes.

The above *résumé* of the progress and present position of industrial arbitration is not complete, but is sufficient to indicate the direction and extent of the movement up to date. And, it may be stated, in the language of Mr. Crompton, as the result of the investigation, that "there is now a complete trust and firm belief among the working-classes in the wisdom of conciliation; that there is a very strong feeling among a very large majority of the artisans in favor of arbitration; but that in several trades there have been failures and disappointments in the results and a want of confidence in arbitration by a court or by a stranger."

The main difficulty of arbitration must arise from the want of knowledge of detail and all the circumstances of the situation which accompanies it, and there has been a noticeable tendency in a large

number of arbitrations towards a compromise, in place of an absolute judicial decision on the merits. As a whole, however, the system of arbitration in industrial disputes, growing as it has done in so short a time and extending itself into almost all trades, must be pronounced a decided success, and recent indications seem to point to a more complete development in the future.

The following (January, 1877) is characteristic of the present satisfactory position of arbitration in the North of England iron trade:—

"*Ironworkers and their Wages.*—It is stated that the following communication has been sent to the secretary of the Ironworkers' Association: 'The employers, members of the board of arbitration, have considered the wages question and then otice that was given by them early in October claiming a reöpening of the whole subject. They find that the statistics brought out by Mr. Waterhouse's quarterly investigations have shown that the claim for a reduction of fifteen per cent that was made a year ago was fully warranted, and, therefore, they consider that they are now entitled to a reduction equal to the whole amount claimed in January last year. They have, however, taken into consideration all the circumstances affecting the case, and have come to the conclusion that they will not press for further reduction on wages. In adopting this course, it must, however, be distinctly understood that the employers clearly maintain that they do not accept the present relation of wages to selling prices as any standard for the future. They hope that the future course of the trade may be such as will render it unnecessary to ask for any further reduction in wages; but they trust that, whatever the condition of things may be during the current year, the good relations that have so long existed between employers and employed in the North of England may be maintained.'"

As showing the position of various influential newspapers, the following extracts from their columns are given:—

THE PRESS ON CONCILIATION IN AGRICULTURE.

[From the Norwich Mercury.]

Give us the wisdom of the serpent and the harmlessness of the dove, ought to be the prayer of the Norfolk Chamber of Agriculture. The National Agricultural Laborers' Union Executive Committee have directed that a communication be sent to our local Chamber, asking it to take the first step toward the establishment of a board of conciliation. If the reply be a refusal to move in the matter, the Union may, and probably will, ask the public generally to see for themselves how ill their good intentions to reëstablish amity and good-will have been met. We do not doubt that a portion of the Chamber would be in favor of a refusal, on the the ground that that body has no authority to treat with, as it certainly has not yet recognized, the Executive Committee of the National Agricultural

Laborers' Union. But if we recognize that the relations of employer and employed are rapidly becoming strictly business relations, and that this is very likely soon to be the universal rule, we see that the Chamber is well adapted to serve the same office for the masters which the Executive Committee of the Union serves for the men. As, moreover, the men, by their agents, bring forward the proposal, the employers can, with good grace, meet them half-way. The experiment is well worth trying over so large an area, and the more so as Norfolk has so many gentlemen who, by their practical knowledge, would be acceptable to all parties, were they to consent to act on a board of conciliation. The experiment would be a new one in agriculture, but it has been tried, and the scheme has worked well for many a year in some trades in France, and of late in many occupations in the North of England. The cases of dispute that would arise here would be few, as most men are open to the argument of plain facts, but the few cases which need to be fairly discussed before a board are just those which lead to strikes and to much ill feeling.

[From the London Echo.]

The governing body of the Laborers' Union have taken the hint given by a member of the Norfolk Chamber of Agriculture. They have frankly and voluntarily offered to assist in establishing a board of conciliation in that county. Mr. Read, in his recent address at the Farmers' Club, said, that he longed for the old feeling of confidence and harmony between farmer and laborer to return once more. He now has a splendid opportunity of putting his benevolent yearning into practice.

[From the Mark Lane Express.]

We shall refer to the subject at greater length on another occasion. This, however, we can not refrain from saying, that any proposal made in the interests of peace and settlement should be favorably entertained and discussed with a sincere desire that something practical may come of it.

[From Reynolds's Newspaper.]

Let us hope from this favorable opening in agriculture we are not far off from the day when a cordial state of feeling between farmers and laborers will lead *both* to the consideration of the wisdom of the laws which now influence the devolution and culture of land. The farmer will never get released from abominable game laws which now eat up his crops, from an insecure tenure not at all provided against under the agricultural holdings act; nor from entail and primogeniture, until he has the help of his laborers' votes in the election of a House of Commons opposed to game laws, to uncertain tenures, and to iniquitous laws of entail. All these considerations will come, for they affect the price of the food of the people, and the people of England are not going to tolerate entailed estates in England any more than they will tolerate pashalics in Turkey.

[From the London Echo, Jan. 3, 1877.]

The Executive Committee of the National Agricultural Laborers' Union have adopted a resolution which will, in all probability, have a

most important effect on the future relations of farmers and laborers. The Secretary of the Union was directed to write to the Secretary of the Norfolk Chamber of Agriculture, requesting that body to appoint a provisional meeting with a view to the establishment of a permanent board of conciliation for agricultural work in Norfolk. This resolution in itself may appear of small importance, but, taken in connection with the circumstances which have led up to it, it may be fairly regarded as the advent of a new era in agricultural wages, in which the mutual hostility of employers and employed shall at all events be moderated and controlled by reason. At a recent meeting of the Norfolk Chamber of Agriculture, Mr. Rose, a Wymondham farmer, stated that he had made inquiries as to the operation of boards of conciliation in some of the manufacturing districts, and that the results appeared to be most satisfactory. Although no definite action was taken at the time by the Norfolk Chamber, Mr. Rose's judicious speech has evoked a hearty response from the governing body of the National Agricultural Laborers' Union. The experiment of conciliation has never yet been tried in agriculture, and perhaps Norfolk would furnish a more favorable field than any other county in England. A board of conciliation works best where the men are well organized, and in the county of Norfolk the National Union has nearly ten thousand members, some few hundreds besides belonging to smaller organizations. In Norfolk, too, the employers have an influential Chamber of Agriculture and a Farmers' Defence Association, while the prominent position of such men as Mr. Clare Sewell Read, Mr. Henry Woods, and other employers in agricultural circles, is likely to lead to the adoption of conciliation in other counties, if Norfolk sets the example.

The proposal to establish a board of conciliation could scarcely have come at a more opportune moment. Though the Union is just now supporting a small number of men, principally in the eastern counties, in their resistance to a reduction of wages, there is no great dispute pending at the present time, and the bitter feelings aroused by the great lock-out of 1874 have passed away. The Union, too, was never so strong in numbers or funds as at the present time, its balance in hand, which is only applicable to trade purposes, amounting to nearly £10,000. The overtures of its executive are made, therefore, at a time of peace and prosperity. On the other hand, the moderate tone of the discussion at the Farmers' Club, last month, shows that on the part of leading agriculturists at any rate, there is some disposition to accept the combinations of labor in the rural districts as a permanent force, to be dealt with from a rational and commercial point of view. Mr. C. S. Read, M. P., though with evident reluctance, accepts the Union as a permanent institution, and bears testimony to its power as a "united and well-drilled organization." There is good reason to believe that some of the leading farmers in Norfolk, though their faith in conciliation may not be strong, are quite willing that the experiment should be tried. Considering that the results will probably be satisfactory to both parties, and are hardly likely to do injury to either, the question at once arises, Why not?

Even arbitration (much less conciliation) has not yet had a fair trial in disputes between farmers and laborers. In 1874, Messrs. Morley and

Dixon succeeded in putting an end to the Lincolnshire lock-out, though they failed in Suffolk and Cambridgeshire. But when that failure occurred the strife had been embittered by a lock-out of several weeks' duration, and the passions of both parties had been thoroughly aroused. There is a wide difference between an attempt at mediation when both sides are fiercely fighting for victory, with strong hopes of success, and the reference of a dispute at the very outset to a board of conciliation, composed of employers and employed. Unionist laborers, before claiming the support of their society in a dispute, are bound to submit to arbitration whenever it is offered; that this rule has not been put into operation hitherto is simply due to the fact that the farmers never would condescend to submit to arbitration.

It is certain that in several of the great trades industrial conciliation is no longer a bold experiment, but a permanent and successful institution. In the Nottingham hosiery trade there has been a board of conciliation, established mainly by the exertions of Mr. Mundella, ever since the year 1860, and with most satisfactory results. The difficulties in this case were by no means small, since all the men are paid by piecework, and statements of prices are fixed to no less than 6,000 articles. The Leicester hosiery trade and the Nottingham lace trade have had similar boards in operation for a considerable time. Still more remarkable has been the success of conciliation in the extensive iron trade at Darlington. In 1869, a board of conciliation was established in that district, which now represents thirty-five iron works and more than thirteen thousand workmen. In 1875 the standing committee of this board settled more than forty disputes. Since 1869 the board has referred six disputes on the general question of wages to arbitration, and the decisions have been loyally accepted, though the men have within two years had to accept a reduction of wages amounting to fifty per cent on the prices paid in 1873. In the coal trade, though arbitration has been generally resorted to of late, and with but few exceptions successfully, boards of conciliation have not been established. On the occasion of a dispute the refusal to submit to arbitration is becoming rare, and still rarer the refusal to abide by the result of such arbitration. Boards of conciliation have also been established in connection with the building trades in several of the great towns, and with marked success. There have been a few cases in which the plan has failed to adjust disputes, owing sometimes to the disloyalty of the employed, and sometimes to the disloyalty of the employers, but these exceptions to the general rule have been few and far between.

One of the most prevalent, but groundless, popular blunders is the idea that trades union leaders are the chief promoters of strikes, from which they reap rich harvests. As a matter of fact, a strike brings to a union officer no additional pay, but a large increase of labor and anxiety. His personal interest lies rather in restraining the eager, impatient spirits among the men. In the oldest and best organized unions it may be calculated as certain that a union officer will never counsel a strike unless in what he considers a case of absolute necessity. From the same motives which compel him to be cautious when a strike is imminent, he will be sure to use his influence to induce the men of his trade loyally to accept

the decisions of a board of conciliation, or of duly appointed arbitrators, as the case may be. Again and again have trades union leaders rendered valuable service to the whole community, by bringing the weight of their influence to bear at critical times. In the North Wales coal trade, Mr. Horatio Lloyd, the county court judge, has borne testimony to the earnest efforts of the leaders of the men to induce them to be true to the awards of arbitrators. In the iron trade, the late Mr. John Kane, secretary of the ironworkers' society, rendered great service in the same direction. The board established in the South Staffordshire iron trade found their great difficulty was with the men who were *not* in the ironworkers' union. It is well that these facts should be widely known at the present time, as only last week a writer in the "Agricultural Gazette" made the erroneous statement that in some of the manufacturing trades the unions had not been loyal to the decisions of the arbitrators. Should conciliation be established in agriculture, it will not fail through the disloyalty of the officers of the union.

There is one great obstacle to the successful operation of boards of conciliation in the rural districts which does not obtain elsewhere. It lies in the fact that the laborers, many thousands of whom in this winter season are earning but eleven shillings, twelve shillings, and thirteen shillings per week, owe their miserable poverty, for the most part, to political causes, and that to legislation they must mainly look for a remedy. The foreign producer of food is protected at the cost of the home producer, by game preservation, by insecurity of tenure, and by our iniquitous land laws. The laborers are unenfranchised, and can only act at present by squeezing the farmers so tightly that from sheer necessity they may be compelled to throw off their political bondage and insist on the redress of their grievances. Were boards of conciliation at once established throughout the rural districts, the immediate effect might be that such pressure would grow lighter rather than heavier, a result to be deprecated alike in the interests of consumers, producers and laborers. But the adoption of conciliation throughout the country must necessarily be a work of time, and ere the experiment now first proposed becomes anything like a general and permanent institution, in all probability the laborers will, by their admission to the polling booths, have an opportunity of pressing the common claims of employer and employed upon the House of Commons.

Be that as it may, the governing body of the Laborers' Union have taken the hint given by a member of the Norfolk Chamber of Agriculture. They have frankly and voluntarily offered to assist in establishing a board of conciliation in that county. Mr. Read, in his recent address at the Farmers' Club, said that he longed for the old feeling of confidence and harmony between farmer and laborer to return once more. He now has a splendid opportunity of putting his benevolent yearnings into practice.

HOWARD EVANS.

Arbitration in Massachusetts.

Following is an account of the principal attempts at arbitration in this State. But little has been done in this country other than as recorded. The data for this part of the report have been furnished by Mr. John Carruthers of Lynn.

In the collection of facts relating to the subject of arbitration in Lynn between the shoe manufacturers and their workmen, one of the chief difficulties has been, that scarcely any record of their doings has been kept by either party. Indeed, most of the agreements between employers and their employés seem to have been verbal; and though in some cases written compacts have been made and signed by both parties, but few have been preserved, and these only show the results reached.

Many of the shoe manufacturers can recollect, in a general way, that at various times they have had disputes and difficulties about prices with their workmen, but exactly the questions involved, or how finally settled, they have now very vague impressions. Therefore the statements herein made are fragmentary, being gathered by repeated personal interviews with such manufacturers and workmen as, from their position, were prominent and active participants in the various troubles that have arisen during the last seven or eight years in this city. It is pleasant to be able to say, that, in making the necessary inquiries, only the most courteous treatment has been received from those appealed to for information; there is also every reason to believe that the statements made have been truthful and correct, according to the best recollections of the persons questioned. As any account of arbitration in Lynn must necessarily be on one side a part of the history of the order of St. Crispin, some facts with regard to that organization and its methods seem indispensable to a proper presentation of the subject, and required at the very outset.

Sometime in the year 1864, Newell Daniels, then living in the town of Milford, Mass., conceived the idea of organizing the shoemakers of that place on the plan of not allowing any one to teach the trade to new hands, without first obtaining the consent of the organization. He went so far as to draft a constitution, and along with Stephen Onion and Elba

Underwood, took some steps toward forming a boot-treers' society upon that plan. Before the preliminary arrangements were completed, however, Mr. Daniels left Massachusetts, settled in the West and for the time being the matter dropped.

About two years afterwards, Mr. Daniels, with some others, succeeded in organizing in the city of Milwaukee, Wis., a society of shoemakers, comprising all who had worked at any branch of the shoe-trade for the space of one year, with the restriction that no member should teach his trade to any one unless by consent of the organization. The constitution written by Mr. Daniels was adopted, and a committee, consisting of W. C. Haynes, F. W. Wallace and Henry Palmer prepared a secret ritual, which at the next meeting was adopted by the organization. F. W. Wallace gave the new society its name,—The Knights of St. Crispin.

They soon afterwards engaged a hall as a place of meeting, and on the 1st of March, 1867, in the city of Milwaukee, established the first lodge of the order. Very shortly thereafter the German custom shoemakers' union of that city adopted the plan and principles of the order, and founded a second lodge. Both lodges increased very rapidly in numbers and influence, and soon commenced active exertions to introduce the order in the Eastern States, and finally, to form a national organization.

Circulars setting forth the plan and principles of the order were prepared and sent to all parts of the country where it was known that shoes were manufactured. By these means Crispinism was introduced into Eastern Massachusetts, where it spread with great rapidity through all the shoe towns.

On the 3d of March, 1868, the first lodge was formed in Lynn,—Unity Lodge, No. 32,—and in less than a year two others were added, the three having a membership of about 5,000. On the 23d of April, 1869, a general convention of the order was held in Worcester, and a preamble and constitution for the International Grand Lodge adopted.

The effects of the revolution, through which, as is well known, the entire shoe business was at that time gradually passing, were nowhere more felt than in Lynn. The complete and final change of methods brought about by the introduc-

tion of steam power and labor-saving machinery, and the consequent subdivision of labor whereby production was greatly increased and cost reduced, the employment of unskilled labor being allowed to an extent before impracticable, were of course disastrous to small manufacturers, whose business now began to be absorbed in larger firms.

The small-shop system was mostly abandoned, and the large-factory system adopted in its place. The Lynn shoemaker, hitherto more or less independent in the management of his business, began to sink into the mere operative, and in place of making a shoe throughout, as formerly, was obliged to work continuously and monotonously at one or another of the thirty or forty branches into which the industry, under the new system, was divided. He thus became a cutter, a laster, a heeler, a beater-out, etc., or was set to run a McKay sewing machine, a skiving machine, a pegging machine, etc., in any of which labors the skilled shoemaker found that the knowledge and experience gained by years of practice gave him little advantage over the green hand.

The natural result of this state of things was to give to the large manufacturers, who could command the necessary capital, a manifest advantage over those of smaller means, who were still struggling along in the business. This is, no doubt, one of the reasons why the small manufacturers looked with more or less favor on the combinations of workingmen, and in particular on their efforts, by means of the Crispin organization, to keep up the rate of wages; for there is every reason to believe that these employers sympathized to some extent with the workingmen, and that it was owing largely to their friendly support and encouragement that the Crispin organization attained to such power and wielded so much influence during the years 1868 and 1869; it was a power they might have continued to retain, to a great extent, had the wise counsels of some of their members prevailed in the lodge-room, and certain provisions of the constitution been altered or repealed; as it is now generally conceded, even by members of the order, that at that time some of their rules were arbitrary, and unjustly interfered with the rights of employers.

In the constitution for subordinate lodges which was adopted by the International Grand Lodge, April 23, 1869, and

which was binding on the order everywhere, were some provisions which bore injuriously upon the rights of manufacturers, or, at all events, left their interests subject to the caprice of temporary majorities in the lodge-room.

The following is from a printed copy :—

"ARTICLE X.—NEW HELP.

"No member of this order shall teach, or aid in teaching, any part or parts of boot or shoe making, unless this lodge shall give permission by a three-fourths vote of those present and voting thereon, when such permission is first asked: *provided*, this article shall not be so construed as to prevent a father from teaching his own son; *provided*, also, that this article shall not be so construed as to hinder any member of this organization from learning any or all parts of the trade."

The following extract is taken from the constitution of the International Grand Lodge, adopted in Worcester, April, 1869 :—

"ARTICLE XIV.—GRIEVANCES.

"SECT. 1. Grievances shall consist of, *first*, being discharged for refusing to teach new help; *second*, being discharged for belonging to the Crispin organization; *third*, being discharged for being conspicuous in organizing new lodges of this order, or advocating its principles.

"SECT. 2. Whenever a grievance is supposed to exist in any lodge of this organization, notice shall be sent by the said lodge to the two nearest lodges of the order, whose duty it shall be, when notification is received, to appoint one delegate from each lodge, which delegates shall, in connection with one appointed from the lodge complaining, form an investigating committee.

"SECT. 3. It shall be the duty of said committee to listen to the evidence on both sides of the case, and endeavor to arrange the matter in dispute. If said matter cannot be arranged satisfactorily, it shall be referred to the State or Province Grand Lodge, which shall decide upon the matter, subject to appeal to the International Grand Lodge."

The committees appointed under section 2 of the preceding article, copied from the International Grand Lodge constitution, were regarded by Crispins as arbitration committees. Members of these committees declare that, in the settlement of all grievances, they were always willing not only to listen

to the employers' side of the question, but took special pains to get that side of the case, even when employers refused to treat with them or in any way recognize their authority.

The following extract, taken from the special laws, will serve to show how grievances were brought before the lodge:—

"ARTICLE I.

"SECT. 1. It shall be the duty of members of the order employed by the same firm to organize by the choice of one of their number as director.

"SECT. 2. Whenever any cause for trouble or grievance is supposed to exist in a shop between the employer and members of the order, it shall be the duty of the director to ascertain the facts of the same, when, if the matter can not be adjusted satisfactorily to the parties interested, he shall, by majority vote of the workers on the part or parts in which the trouble occurs, refer the case to the lodge.

"ARTICLE II.

"SECT. 1. The director of each shop shall collect the dues of all members working in his shop, etc.

"SECT. 2. When a member working in a shop is six months in arrears for dues, the members in good standing shall demand that he become square on the books of his lodge, when, if he refuses, the director shall require of the foreman or employer the discharge of such delinquent; such request not being complied with, the director shall immediately refer the case to the lodge.

"ARTICLE III.

"SECT. 1. Every member taking a job in a new shop shall, upon entering, inquire for the director, and shall deliver up for inspection his paid-up card or director's receipt, and any member evading or refusing to comply with the provisions of this special law, the director shall proceed as laid down in article 2, section 2, of these special laws. All directors and members of the order are hereby instructed and empowered to attend to the rigid enforcement of this article."

Many of the most intelligent Crispins state that they always believed some of these rules to be unjust and arbitrary, and that the order, by their enforcement, was attempting to deal with matters not within its proper province; that they had often urged their repeal, giving it as their opinion, in the

course of discussion in the lodge-room, where these matters came up, that employers were only submissive to such restrictions to save themselves from loss, and were determined to free themselves on the first opportunity from restraints under which they were every day becoming more and more restive.

Manufacturers of the smaller class, as we have before remarked, express themselves, for the most part, as having been favorable to the order on its first establishment. They think it might have been made a means of protection to their interests, as well as those of the workmen. But they say that, in the latter part of the year 1868 and during a portion of 1869, when the organization had almost full sway, the Crispins became exacting, presumptuous and insolent in their demands upon employers, often interfering with matters they did not understand, and which, at any rate, were not their concern; that, by the operation of the special laws, manufacturers were subject to loss and continual annoyance; that they could not discharge a man for any reason but he was almost sure to make complaint to his lodge, calling it a grievance and asking for a committee of arbitration; that there were many instances where they felt such committees had not treated manufacturers with even a shadow of justice; that it sometimes happened that an employer had reasons for his action, which he was not willing or even justified in unfolding to the committee; that, in all such cases, the committees were apt to be influenced by the most narrow views, and almost certain to decide against the employer; and that, even when the matter was fairly investigated and fairly reported to the lodge, it was always easy for a few demagogues or a small faction, by specious talk, to carry any vote they desired, sometimes ordering manufacturers to take men back into their employment whom they did not want, and sometimes to discharge men they needed and were anxious to keep, and who, on their part, were contented and willing to stay.

Manufacturers who are conducting a large business and employ many hands, express themselves as having always been opposed to Crispinism, and indignant at its claims. They have no objection to combinations of workingmen to keep up the rate of wages, in any fair and legitimate

way; but, they say, "These men assumed to control our whole business. We claim the right to employ any who are willing to work for us, for as long as we please, and to discharge them when we please, without giving outsiders any reason." They further say that no disputes were ever properly settled by arbitration in the lodge-room or elsewhere; that in any disagreement with their own workmen, they felt that matters could have been much more easily arranged in the shop than by men outside, who could have little knowledge of the points at issue, and, perhaps, no regard for the various interests involved; that Crispin rule had been of great injury to the shoe business in Lynn; that, under its influence, the workman had given up his independence; he had ceased to make his own bargains, and might at any time be obliged to leave a profitable situation at the dictation of his lodge, and without respect to his interest or inclination; that, under the operation of Crispin interference, manufacturers had been afraid to make contracts or take heavy orders for goods, having no certainty that they could control their own business, and that, in consequence, many of the orders of 1869, which would otherwise have been filled in Lynn, were taken elsewhere; that at that time some of the large firms began to establish shoe-shops in other places. Factories were opened in Pittsfield, N. H., where the proprietors felt themselves safe from the effects of Crispin authority, and could command the advantages of cheap rents and cheap labor. In consequence, a large part of the work was done out of the city, which in other years had been retained there, for there was so much sharp competition among manufacturers, that each was on the watch continually to gain, if possible, any advantage over others; thus, though the workmen did receive more for their labor while at work, there was so much less work done in Lynn, that it is believed they really earned less money than they would have done had there been no organization. And they further state that during the year 1869, though there was no outbreak of a public nature, nor any mention of troubles by the press, yet the relations between the employers and the operatives were full of distrust and ill-feeling on both sides.

The records of the Crispin lodges seem to confirm the latter

statement, as they show many cases of difficulty and trouble in the shops about that time. A manufacturer, at that time one of the largest in Lynn, states that he had but little trouble with his workmen on any occasion, and that most of the difficulties in which he became involved arose from his taking part with other firms; that during the year 1869 he had much more respect for the Crispins than for the employers, as the former held together and stood firmly to their rules, arbitrary and unjust though, in his opinion, they were; whereas manufacturers were so jealous of each other, that they could unite in nothing, but, on the contrary, were continually seeking to overreach or undermine each other. Further, he says Crispinism did not affect his business much, as he only manufactured first-class work, and always paid the very highest price for labor. But he was opposed to it from principle, and if he could have had other employers see as he did, it could never have gained such power in Lynn, and might at any time have been broken up by united action.

The following statement embodies the views and opinions of many of the leading shoe manufacturers of Lynn as gathered from time to time by personal interviews and conversations with them on this subject.

About the spring of 1870, many manufacturers finding it impossible to prosecute their business with any certainty of success, under the vexatious, unjust and arrogant demands of the Crispin organization, determined to endeavor by concert of action to find some means through which they might free themselves; in this they professed to be influenced not alone by motives of self-interest, but by a sincere regard for the best interests and welfare of their workmen. They saw very clearly that unless something was done, trade would leave the city, as no manufacturer felt safe in taking orders for goods, or entering into contracts with dealers in boots and shoes. While these matters were under consideration, and before any plans had been matured, one of the most prominent manufacturers in the city, without consultation, and almost entirely on his own responsibility, by means of one of his workmen, got himself invited into a meeting of one of the Crispin lodges, and there and then made a speech, in which he commended their organization and its principles.

Deploring the misunderstanding between employer and employé, he pledged his word, that if they would appoint a committee of five of their number, he would see that a like number of manufacturers were appointed to meet with them and talk over matters in an amicable manner; so that, if possible, some agreement might be reached which would be mutually satisfactory. In taking this unauthorized step, this gentleman was regarded by the other manufacturers as having betrayed their cause. His action excited considerable indignation among them, and the committee of five who finally met with the Crispin committee to arrange a scale of prices were self-appointed; but being all of them prominent men in the business, and large employers, their influence was such as to very much strengthen and encourage the Crispin organization. The manufacturers felt that their interests had been betrayed, and their attempted union broken up, yet they were obliged, as the best they could do under the circumstances, to adopt generally the scale of prices which had been agreed upon by the so-called committees. They were, however, none the less restive under the arrogant and arbitrary demands of the Crispins, and indignant that any employer of labor should acknowledge the right of an employé to interfere with his business.

In justice to this gentleman, it should be stated, that he felt the steps taken by him at that time were for the best interests of all concerned. He states that he has always tried to treat his workmen as equals, and has never been intentionally oppressive. The principle of arbitration inaugurated by him at that time, he believes to be just, and that it might be made an effectual means of settling all disputes, if both parties could only be prevailed upon to carry it out in good faith. He regards some union of workingmen as necessary for the protection of their own interests, and such union is, in many other respects, likely to be more or less advantageous to them; and though at that time there was much in the Crispin organization which he could by no means approve, it was his idea that it would have been better for the interests of the whole city if employers, by adopting a kind and forbearing policy towards the workingmen, could have established a better understanding of each others' interests; and when by

mutual consultation and mutual concessions, confidence and good feeling should have obtained, it would not have been difficult to change or abolish the most objectionable provisions of the Crispin organization.

On the whole, this gentleman seems to entertain broad and comprehensive views of the subject, looking rather to the permanent welfare of the whole community, than to any individual interest. The ideas of the workingmen are various, but they may be summed up into three classes, as follows:—

The first class are those who do not believe in arbitration with employers, who have seen nothing but what is right in the most rigorous rules the Crispins ever adopted, and who would willingly have adopted those more stringent. The admission of a manufacturer into their lodge-room, as mentioned previously, was regarded by these members of the organization as a departure from the established principles of the Crispin order, and the acceptance of the doctrine of arbitration as a clear violation of its laws.

They argue that workingmen having their labor to sell ought to combine and fix among themselves what its price shall be. That if workingmen would only so unite, good wages could be maintained with certainty, employers would be obliged to agree to their demands, and as they would make their contracts for goods accordingly, it would be advantageous to the community as a whole. They say that arbitration between employer and employé always did and always will result to the advantage of the former and the disadvantage of the latter; and that, therefore, they regarded the establishment of such a principle in 1870 as a delusion and a snare; it was the entering wedge which first weakened and finally led to the complete overthrow of the Crispin organization.

A second class are of the opinion that a proper system of arbitration would do much to put an end to the disagreements between employers and operatives. That if such a board could be permanently established, composed of representative men from both parties, clothed with powers and supported by the general consent of those interested, strikes might be rendered impossible and the relations between employers and their workmen made mutually pleasant. But, they say,

under existing circumstances, such a scheme is altogether impracticable.

Manufacturers generally are not sincere when they talk of justice to labor. It is their interest and object to get all the labor they can for as little pay as possible, and they will never give a cent more than they are obliged to. They do not generally believe in the right of workingmen to combine, but are continually arguing that the law of supply and demand regulates the rate of wages, and that it is their right as employers to hire labor in a free market for as low a price as possible. They claim that while employers hold such views, it is very evident they can not be induced to treat with workingmen on equal terms under any form of organization.

They further say that, in their opinion, the arrangements made in 1870 were only agreed to because employers could not help themselves, and that they were sure to be violated whenever interest demanded.

The third class of Crispins, though, perhaps, not the most numerous, hold about the same sentiments as those expressed by the manufacturer previously quoted. They state that they have been always more than ready to welcome any overtures from the manufacturers looking toward arbitration in the settlement of disputes or difficulties, and have been ready on all occasions to do their utmost to bring about friendly relations between employers and the Crispin organization. They concede that some of the Crispin laws were illiberal and unjust, placing improper restrictions upon both parties; restrictions which, from their very nature, could not be successfully maintained for any length of time. They specify in particular those laws relating to the hiring and discharge of help, against the enforcement of which they declare they often protested in the lodge-room, pronouncing interference in these matters one of the most fatal weaknesses of the Crispin order.

This class of men say they always have deplored strikes, and never gave consent to one, except as a last resort. When, therefore, arbitration was proposed by a leading manufacturer, the idea was hailed by them as a long step in the right direction, and they were ready to aid it by every means in their power. A mass meeting of the lodges

was held, and, after some discussion, a committee of five was appointed to confer with a like number of manufacturers. On the 21st of July, 1870, these committees met in the Board of Trade rooms. There seems to have been no record kept of the transactions of this meeting, but members on the part of the Crispins state that it was anything but harmonious, and that more than once open rupture seemed imminent. One manufacturer made a speech, in the course of which he said that if any one had told him twenty-four hours before that he could have been persuaded to meet and treat with Crispins on any terms, he should have felt insulted. Through the exertions of a few more temperate minds, however, a better spirit finally prevailed, and, after much discussion, taking up two full days, a list of prices was agreed upon and adopted, to continue in force for one year. The two committees then exchanged congratulations. Speeches were made by some of the manufacturers, in which they commended the Crispin organization, and pledged themselves to rigidly adhere to the agreement made, and to use every proper means in their power to have it recognized and adopted in the trade throughout the city. After this united action, several strikes, which had previously been inaugurated, came at once to an end. The Crispins were jubilant, and considered they had gained a point in being recognized by employers as a body to be negotiated with on equal terms; and much confidence was expressed on all sides, that at length amicable relations had been permanently established between the manufacturers and workingmen of Lynn.

Notwithstanding the fault found with the doings of the self-appointed committee (so called), there is no doubt that for the time being, at all events, they were successful, and the list of prices agreed to by them was substantially that of the trade throughout the city for the next year.

It is charged, however, by the Crispins, that they could never again get that board of arbitration to meet with them; that in the settlement of difficulties which now and then arose from various causes in several of the shops, they received no aid or countenance from the employers, and that they had to assume the whole burden of enforcing the scale of prices, which, however, being printed, and headed,

"List of Prices agreed upon between the Manufacturers and Knights of St. Crispin for one year from date," gave them a support in the arrangement of grievances they could not otherwise have had. Yet, still, it is evident that the Lynn shoe manufacturers generally considered that during this year there had been established some principle of arbitration to which they felt themselves, to a great extent at least, obliged to conform.

At the expiration of the time agreed upon, another committee of employers met with the Crispin committee of arbitration. They congratulated each other upon the success which had attended the fulfilment of the agreement just ended, the general peace and harmony which had prevailed and the prosperous condition of the city; after which a scale of prices was agreed to and adopted for another year, which was subsequently printed and circulated through all the shoe-shops in the city. It is worthy of notice, that, during these two years, when a fixed rate for labor had been established by this joint committee, the shoe business prospered, and the active and material growth of Lynn was the subject of frequent and flattering comment, not only in the local press, but throughout the country.

The statements made regarding the condition of affairs during the year of the second compact between the manufacturers and the workmen, ending June 10, 1872, are in some respects conflicting. While there was no noticeable outbreak, those acquainted with the inside history of that time state that distrust and bitter feelings began to be engendered as early as the fall of 1871; that though latent and smouldering, the fires of strife were then kindled which burst into flame the next summer, and thus brought about the disastrous strike of 1872. The records of the Crispin lodge show several complaints against manufacturers for cutting under the established prices in less than three months from the date of agreement, and the lodge records for the latter part of 1871 and the first part of 1872 show continual difficulties of that nature brought into the lodge-room. The Crispins say, that, in their efforts to adjust these difficulties, they received neither sympathy nor aid from employers; that though they repeatedly tried, they never could get a meeting with any board of arbitration on the part

of employers; and that, finally, those manufacturers who had taken part in assisting to establish the scale of prices refused to be considered as belonging to a board of arbitration, were unwilling even to recognize the existence of any such board or principle and absolutely declined to discuss the subjects which had been considered with so much harmony and good feeling when the compact was made.

On the other hand, it is conceded that bitter and vindictive feelings crept into the lodge-room, and at times controlled the counsels of Crispins. The more intelligent and reasonable among them lost much of their influence, and there were some instances where temporary majorities, in meetings of the order, made decisions very clearly unjust, and against the interests and rights of employers. It is also conceded that in many respects Crispinism lost much of its former power over its members generally; they paid little regard to its rules, and were seemingly weary of the restraints imposed by the organization. It is said, however, that these troubles were but little known to the general public; that the Crispins, as an organization, adhered to the established price-list, and still struggled to maintain it throughout the city.

Manufacturers, on the other hand, charge that Crispinism had become perfectly unbearable; that the Crispins, elated with success and full of self-confidence, became every day more and more unreasonable in their demands; that they were continually trumping up fresh grievances and insisting upon conditions not only inconvenient to employers and injurious to their interests, but tending, if carried out, to drive trade from the city and ruin all concerned.

They further charge that certain of the Crispins had entered into secret contracts with some firms to work for less than the established prices, induced to do so by promise of steady work throughout the year, and that these very men were the loudest in insistence that the trade generally should conform to the established price-list. A few declare that the Crispin organization was at this time entirely in the hands of demagogues, who only used the order for their own selfish purposes.

Some of the most intelligent and reliable men who, in 1872, were leading and prominent members of the order, state that shortly before the termination of the second compact it was

evident to them that certain manufacturers were determined if possible to prevent any further agreements of that nature; and that, in the spring of that year, they united with the resolute purpose of breaking up the Crispin organization.

They further say, that, while it must be admitted that there is some truth in the charges brought against the order, it is not the less true that employers never sincerely tried to make the best of it, but all along showed by their actions a spirit of opposition to it in any form; that if the committee of arbitration on the part of employers had even partially done as they promised, there would have been no trouble, as the workingmen were always more than willing to leave any grievance, real or supposed, to be settled upon that plan; that had employers generally shown such interest in the well-being of their employés, as they all of them professed to feel, any of the unreasonable rules or laws of the Crispin order could and would have been modified or abolished.

They express respect for the position taken by some who, from the very first, were the avowed and consistent opponents of the order, but were still too high-minded and honorable to take underhanded action against it.

But they allege that there were some employers so mean as to bribe certain of their men to divulge the secrets of the lodge-room and to act the part of traitors to the order; that many of the wrongs and much of the injustice with which the order was charged was instigated and brought about by these very men, acting under the instructions of their employers. They further point out, that the contentions about prices for labor have always been caused by a few of the manufacturers who, with selfish greed, were struggling to gain advantage over their neighbors; that the difference of two or three cents per pair on the price of the finished shoe is a difference the consumer will never feel, but that it is a matter of serious importance to the workman. They claim that employers should consider this fact first of all, in making contracts for goods with dealers. They finally allege, that, in the spring of 1872, when contracts with the dealers were made for the next season's work, there was such sharp competition among manufacturers, that they were taken at rates too low to afford the price for labor established by the board of arbitration, and that this, more

than any other cause, led to the strike the next summer, and united employers to overthrow the Crispin organization.

About the middle of June, 1872, the following circular, signed by the Crispin committee, was sent to all the shoe-shops in the city :—

"To the Boot and Shoe Manufacturers of Lynn.

"GENTLEMEN :—We, the undersigned, a committee appointed by the Knights of St. Crispin, in mass convention assembled, respectfully notify you that we are prepared to meet with a similar committee of the shoe manufacturers of Lynn, with a view to arranging a list of prices for the coming year.

"Please inform us, through our secretary, of your action, at as early a date as convenient."

To this communication no reply was ever received. About the beginning of July, some of the large firms intimated their intention of reducing the price for setting edges one-half of a cent per pair, claiming that having introduced edge-setting machines the workmen could afford the reduction. This reduction they held necessary to enable them to compete with firms outside of the city.

The workmen replied that the edge-setting machine did not in the least facilitate their labor ; that manufacturers were paying contentedly the higher price with or without machines, and urged that the contracts were taken on that basis ; they finally invited their employers to appoint a committee to fix a scale of prices, in consultation with the Crispins, as in the preceding years. To this the employers rejoined, that for the future they intended to manage their business without consultation with any one ; the price offered was all they could or would pay, and the workmen must either take that or leave. Of course this condition of things speedily became a subject of discussion in the Crispin lodges. They held mass meetings, some of which were full of intense excitement and lasted all night. New members joined, and old members in arrears came flocking forward to pay their dues.

Resolutions were passed declaring their firm determination to adhere to the principles of the order. Finally, committees were appointed to wait upon the manufacturers, and endeavor to bring about a settlement of the difficulties. Members of

those committees state that when, in the performance of the duty assigned them, they approached the same parties by whom they had been so courteously received on previous occasions, and with whom they had arranged the scale of prices for the preceding year, they were met by contempt and ordered to leave the premises; so that those who before had shown a most kindly feeling toward their society, were then unwilling to recognize its existence.

These facts being reported to the lodges, a mass meeting was called, at which it was ordered that the men in such of the shops as were cutting under the established prices be requested to finish what work they had in hand, and then at once leave the shop. In accordance with this action, the hands in thirty-five shops stopped work, and it became evident that the relations of capital and labor in Lynn were to go through a serious crisis. At the first, however, the other shops in the city kept steadily at work, some of the employers freely saying that they could see no particular reason for the reduction, and therefore they should continue to pay the old prices.

It is believed, that had this dispute about prices been the real question at issue, and had it been left to be decided upon its merits, the Crispins would have gained their point. It very soon became evident, however, that this was only the first move,—a mere out-post in the battle,—the real object of which was to be the utter and complete overthrow of the Crispin organization in Lynn. For with this object openly avowed, the manufacturers commenced to organize, funds were raised, and agents sent to the several employers to enlist their aid and sympathy in the movement.

The following is an extract from the "Lynn Reporter," August 10, 1872:—

"On the 2d of August, a meeting of the shoe manufacturers was held, at which were present about fifty of those most prominent in the business. At this meeting, the opinion was generally expressed that the state of things as had for some time past existed in Lynn could not continue without serious injury to the business of the city. It was stated that some of the manufacturers had already established flourishing factories in distant towns, where labor was untrammelled and consequently cheaper than in Lynn, and that others were making arrangements for an early removal. It seemed to be the

unanimous feeling that something should be done to check this emigration of business, and the first step towards that end must be in each manufacturer maintaining the same control of his business, especially in regard to the payment of wages, that is enjoyed by the manufacturers in other places, thus enabling the Lynn manufacturers to successfully compete with those in other places. . . . It was then unanimously resolved, 'That it is for the best interests of the city of Lynn, that every manufacturer manage his own business irrespective of any organization.'"

After the passage of this resolution condemning organizations of workingmen, the manufacturers proceeded to organize under the following agreement:—

"We, the undersigned manufacturers of the city of Lynn, hereby agree that on and after Saturday, August 10, 1872, we will employ no person subject to, or under the control of, any organization claiming the power to interfere with any contract between employer and employé."

A committee was appointed to circulate the above through the city, and it was subsequently printed with fifty names appended.

At a subsequent meeting of manufacturers, held in Music Hall, August 8, it was unanimously—

"*Resolved*, That we notify our workmen that after Saturday, August 10, we will give no new work to any person subject to, or under the control of, any organization claiming the power to interfere with any contract between employer and employé."

The result of this action was that more than 2,000 workmen gave up their situations rather than leave the Crispin organization.

At a mass meeting of the Crispins, held soon after, the following preamble and resolutions were adopted:—

"*Whereas*, There is a disposition on the part of certain manufacturers in the city of Lynn to dictate unjust, illiberal, and, to use a mild phrase, tyrannical terms to those in their employ; and

"*Whereas*, Our acceptance of such terms could only be made by a complete sacrifice of self-respect and personal independence; therefore, be it

"*Resolved*, By the Crispins of Lynn, in mass meeting assembled, that while we recognize the right of manufacturers to offer such terms as justice and regard for their own interests may require, we also assert and maintain, at every cost and every hazard, our right to belong to, and participate in, any organization, social, industrial, religious, political or beneficiary, which in our judgment is wise and proper; and any attempt on the part of any one to abridge or obstruct such right is a vile and indefensible interference with personal liberty."

Thus the Crispins joined issue in a struggle which they felt was to be for the life of their organization, and they clearly saw that the manufacturers were bound together as they never had been previously. The employés in a certain shop were all Crispins; there had been no trouble there, as Crispin prices were paid; but this firm had signed the agreement of the manufacturers not to employ Crispins after August 10, and on that day the senior partner called his men together and told them they must either abandon the Crispin organization or cease to be employed by him. "You can go," he said, "or you can remain. I do not ask you to work at any reduction of wages, for I am ready to pay the very highest prices; but if you remain, you must cease to be Crispins, for no member of that order shall occupy a bench here after to-day." They were given a day to think of it; but in fifteen minutes they reported that rather than submit to such unjust and arbitrary interference with their personal liberty and rights as freemen, they would leave, and they therefore all left at once.

In another shop, the following letter was read to the workmen by one of the firm, in connection with the agreement signed by them:—

"In submitting the proposition herewith placed before our employés, we desire to state the following facts:

"*First.* That in assuming the position taken in the accompanying resolution, manufacturers of the city of Lynn, representing at least three-fourths of the shoe manufacturing business of this city, have acted from a conviction reached after the most careful and deliberate thought, that upon no other basis can this business be successfully prosecuted.

"*Second.* That in taking this position as a body, we have fully

counted the cost, and feel that we are united, as never before, in solemn agreement to abide the result of this action, at whatever sacrifice to our business and to our capital.

"*Third.* That the question of wages has in no manner entered into our counsels, but that this question is left open to the unembarrassed action of employer and employé.

"*Fourth.* That we, as a firm, have had, and still have, no desire to change our prices for work during the present season.

"*Fifth.* That it is the earnest desire of this firm to conduct its business in such a manner that the annual earnings of our employés may reach the largest possible amount; and we submit the fact that our books show that this result was much more fully attained during the years when we were left free to arrange prices with our workmen to our mutual satisfaction, than it has been during the two years just passed, when subject to outside dictation.

"*Sixth.* That while this firm will in no case recede from the position now taken, whether supported by others or not, we would express the sincere desire that, whatever may be the issue in the question now before us, no action will be taken upon either side in a spirit which will tend to destroy the feelings of friendship and respect which we believe now mutually prevail between us.

"Signed,

"LYNN, August 9, 1872."

The alternative of withdrawing from the Knights of St. Crispin or giving up their situations being thus placed before the workmen, they one and all preferred the latter and left the shop. These examples were quickly followed in other shops; very soon the city swarmed with idlers, and the Crispin committees found a most difficult task upon their hands. By article fifth of the general laws, every one of these unemployed men was entitled to draw from the funds of the order: for a single man, six dollars per week; for a man with a family, six for himself, two for a wife or mother dependent upon him, and one for each child under twelve years of age. As no ordinary treasury could long endure such a drain upon its resources, the Crispins soon began to realize that the situation was grave in the extreme, and that their prospects of success were every day becoming more and more doubtful. Notwithstanding the great excitement, and though various rumors were daily floating through the city, it was never alleged that any sort of coercion was threatened against those

of the trade who did not belong to the order. Indeed, it was the subject of much comment in newspapers which in other respects did them less than justice, that the workingmen were worthy of praise for the quiet and peaceable manner in which they conducted themselves throughout the whole of the troubles.

August 17th, the Crispin committee of arbitration held an all night session, during which the situation was discussed in all its aspects, and the result of their deliberations was a determination to make an attempt to effect a reconciliation. A committee was appointed which, the next Monday forenoon, waited upon many of the leading manufacturers who had signed the agreement of August 8th and made to them the following proposition, upon the adoption of which the committee guaranteed that the men would return to their work: *Firstly*, That the question be not raised by the employers whether or not the men belonged to the Crispin organization, which order should continue to exist as heretofore. And, *secondly*, that the list of prices be abolished, and that each firm make its own contracts and arrange its own prices with its own workmen, irrespective of any other firm and without interference by the Crispin organization. It was confidently expected that this action would impress the manufacturers favorably and that they would consent upon these terms to resume business.

But when waited upon by the above-mentioned committee, they one and all refused to receive any proposition from Crispins, taking the ground that having agreed to give no employment for the future to any men subject to the control of such organization, they felt bound not to acknowledge its existence.

At a mass meeting of the Crispins, held next forenoon, the board of arbitration reported the failure of their efforts at reconciliation; and when it became known that the ultimatum of the manufacturers was an entire and final renunciation of Crispinism on the part of the workmen before any proposition of settlement would be entertained, there was considerable excitement, speeches were made and resolutions passed by a unanimous vote and amidst much enthusiasm, pledging unwavering fidelity to the order. Notwithstanding this last

display of spirit, it soon became evident that the Crispin organization was fast becoming weaker; that its power of resistance was gone and its unity broken up.

Manufacturers commenced work with what help they could get, either in Lynn or in other places. Some firms sent their stock to Portland, Newburyport and other towns to be made up; other firms set men to work under what they called a special agreement; which was that, though they belonged to the Crispin organization, there was an express understanding that this fact should have nothing to do with any of their relations to their employers. The board of arbitration having remonstrated against such arrangements as a violation of the rules of the Crispin order, the workmen in one case published a card in the newspapers to the effect that they were not at work under the force of the manufacturers' resolution, but that they still regarded themselves subject to the orders of the Knights of St. Crispin. For this action, these men were at once discharged from their employment and ordered to leave the establishment. They soon afterwards, however, published another card retracting their former statement, and were again set to work in their old places.

By this time, the Crispin board of arbitration began to feel itself powerless; the treasury was exhausted, two thousand members of the order were without employment and mostly without means of living. Manufacturers were offering work and the highest prices to all who would consent to renounce fealty to the Knights of St. Crispin. It is not surprising therefore, that one shop's crew after another met together and, coming to the conclusion that any further struggle was hopeless, voted to go to work on the best terms they could get. By the 24th of August the strike was virtually at an end, and though lodge-meetings were still held by an indomitable few, the Crispin organization, in spite of their efforts, finally fell entirely to pieces in Lynn. About the beginning of 1873 the last charter was surrendered to the International Grand Lodge. During the next two years there was, as is well known, a general depression in all kinds of business, and the shoe trade came in for its share. There was little demand for goods, the sales being chiefly of the cheaper grades.

Manufacturers were in sharp competition with each other for orders, and workingmen, without organization and at their mercy. Prices for labor in nearly all departments of the business went down until, it is said, a good workman, laboring hard ten or twelve hours a day, could not earn more than eight or nine dollars a week. To understand the full force of this statement, it is necessary to remember that at the best of times the busy seasons are brief, and that there are always many months in the year when there is but little chance of employment.

Manufacturers themselves admitted that the prices for labor were too low, and confessed that they could not understand how men with families to support, managed to do so, even when they had constant work. Some of them even began to admit that the Crispin organization, with all its faults, contained some good features, and that some association of workingmen was necessary, not only for their own protection, but for certain advantages to employers.

With considerable countenance and aid, therefore, from some of the manufacturers, the workingmen again organized, under the name of the Shoemakers' League. One of the main features of this organization was the establishment of a board of arbitration. This was about the beginning of 1875, and though they held meetings more or less regularly, there is no evidence that they ever exercised much influence, and as the members hardly numbered three hundred at the most, the League could never claim properly to represent the general interests of the Lynn workingmen. Therefore, after about an eleven-month struggle to maintain an existence, on the seventh day of December, 1875, by unanimous vote, the League dissolved, and the members organized as Unity Lodge, K. O. S. C., adopting the ritual of the order and receiving from the International Grand Lodge the charter which was surrendered in 1873. Unity Lodge now numbers nearly three thousand members, and since its organization has sent delegates into twenty-eight towns and instituted thirty-one new lodges, as follows:—

West Boylston, Milford, Haverhill, Marblehead, Worcester, Spencer, Stoneham, Hopkinton, Medway Village, West Medway, Rockland, Stoughton, Randolph, Methuen, Newbury-

port, Millbury, Beverly, Salem, Marlborough, Natick, Cochituate, Quincy, Weymouth, Tapleyville, Holbrook, Webster, Brockton and North Brookfield in Massachusetts, and Pittsfield in New Hampshire. All these are represented to be in a prosperous condition. The most objectionable features of the old order have been done away with. No claim is made to any right of interference with employers in the hiring and discharge of help, nor in the teaching of new help any part or parts of the trade. No strike can be ordered, sustained or allowed except by vote of the board of arbitration and the unanimous consent of the shop's crew where such strike takes place.

The board of arbitration is composed of eleven members, each from a different branch of labor, as follows: a cutter, stock-fitter, laster, McKay stitcher, beater-out, trimmer and edge-setter, hand nailer and shaver, Tapley heel burnisher, McKay nailer and shaver, bottom finisher, channeller.

They are elected to office for a year, and chosen, not alone for their integrity and general intelligence, but also because they are regarded as superior workmen, each being an expert in his branch of the business.

To this board are committed all the active powers of the lodge. The following is an extract from the by-laws:—

"ARTICLE X.—ARBITRATION.

"SECT. 2. At the first meeting of the board, they shall organize, by electing a president, secretary and treasurer. It shall be the duty of the president to convene the board, on the written application of any five members of the lodge working in a shop, or on application of a manufacturer who has cause to think he is aggrieved. The secretary shall keep a true and correct record of the proceedings of all meetings of the board, and of all subjects referred to them for decision, and shall report the doings of the board to the lodge, at the first meeting in every month.

"SECT. 4. The board shall have power to settle all difficulties that may arise between any member or members of the lodge and their employers, by arbitration; and it shall be the duty of the board, when such case has been referred to them, to carefully examine all the circumstances connected with it and endeavor to effect a settlement by arbitration, before giving their consent to a strike. It will not be the duty of the board to give aid or encouragement to a strike, begun without their consent, by any members of the order.

"SECT. 5. When any matter has been referred to the board for arbitration, it shall be their duty to appoint a committee from the board, who shall meet a committee appointed by the employer.

"If the committees agree upon any plan of settlement, any decision they may make shall be final. An appeal may be made to the lodge from all decisions made by the board, except in cases referred to them for arbitration. This section shall never be repealed.

"SECT. 6. The board shall meet once in two weeks, or oftener if necessary, and shall require at all times a majority of its members to transact business.

"SECT. 7. The board shall have power to call a special meeting of the lodge at any time they may deem it necessary."

In the thirteen months that have elapsed since its organization, this board has settled about one hundred cases of difficulty in different shops, most of them amicably and without much trouble. Nearly all of them arose from attempts on the part of employers to cut under what was considered a fair price, and as the chief object of the board is to establish and maintain, as nearly as possible, a uniform price for labor in all branches and grades of work in shoemaking, many of the manufacturers look upon the plan with favor, and they extend to it a certain moral support, though as yet they have appointed no committee to act in conjunction with the Crispin board. Still the smaller employers especially regard its establishment as useful and efficient in preventing ruinous competition in the business.

The following cases illustrate sufficiently the various work of the board:—

A reduction in the prices paid for trimming and edge-setting was proposed by a certain firm. This was resisted by the workmen, who made complaint to the board of arbitration. It was claimed by the firm, in reply to questions put by the committee, that they had at considerable expense introduced edge-setting machines, which materially lessened the labor, and their use would enable the men to earn as much pay notwithstanding the proposed reduction of price. On the other hand it was stated by the men, that the machines were of little or no service in the way of saving labor or facilitating the work.

After a full investigation, the board arranged the prices for

work with edge-setting machines in this shop, as follows: $1.65 for first, $1.50 for second and $1.25 for third quality. This arrangement, which was satisfactory to both parties, was considered to be a settlement of the difficulty without a reduction.

Complaint was made to the board that certain channellers had been discharged from a shop for the reason that they had been active in inducing what is termed a boss channeller—that is, one who underlets part of the work taken out by him—to give up that position. On the report of a committee appointed to investigate, the board were of opinion that the men had been discharged without reasonable cause, and they therefore informed the manufacturer that no Crispins would be allowed to take their places. The result was, that the men who had been discharged were reinstated.

In another shop a general reduction of prices was proposed, which being resisted by the men, the subject came before the board, who appointed a committee to wait upon the employers, directing the men in the meantime to continue work as usual. After due investigation the board sustained the men in their resistance. The firm retreated from their position and continued to pay former prices.

The channellers in another shop complained to the board that they were receiving less for their work than established rates, and that they had requested an advance, which was refused. A committee from the board waited upon the proprietor, found the facts to be as stated and finally induced him to concede the demand of his workmen.

A certain firm proposed to reduce the prices paid for trimming, edge-setting, nailing and shaving. The reduction was resisted by the men, and two of those most prominent in opposition were discharged. The board of arbitration sustained the operatives and, after several meetings with their employers, finally induced them to continue to pay old prices and also to reinstate the men who had been discharged.

Another firm proposed to make a general reduction on certain kinds of work, and the matter came before the board for adjudication. After considerable discussion the board prepared a list of prices for the shop, which the firm consented to adopt for the season.

A shoemaker complained to the board that he had been discharged from his shop without valid reason. The committee of investigation reported that he was discharged for making an assault on the foreman of the shop. The action of the proprietor was sustained by the board and the complaint dismissed.

A difficulty arose in a shop with regard to the price to be paid for machine lasting. On investigating this case the board held that lasting machines were of no advantage to the operator, there being no saving of time or labor by their use; that therefore the prices should be fixed at the same rates as were paid for hand lasting. This was finally agreed to by the proprietor, who also, at the suggestion of the board, consented to employ his hand lasters to work such lasting machines as he should decide to use.

In the same shop a McKay machine operator, who had been discharged for seeking an advance of price, was reinstated in his position by the exertions of the board, and the advance secured to him.

The lasters, trimmers, edge-setters and buffers in a shop, believing that they were working for lower prices than were paid elsewhere for similar work, demanded an advance. On investigation the board sustained them in their demand, and eventually succeeded in securing for them the prices paid in other shops for the same grade of work.

A certain firm had a shop in Lynn and also one in another State. The hands in the latter struck work when a reduction of prices was proposed to them, and complaint was subsequently made to the board of arbitration in Lynn that the firm was having certain parts of its work done in their Lynn shop and afterwards sent to their shop out of the State to be completed. The board on investigating the case came to the conclusion that it was beyond their province to interfere with prices paid in other places, but determined to insist that all work done in Lynn should be paid for at the established rates. The firm finally closed the shop in which the difficulty arose and now manufacture all their goods in Lynn and pay the established prices.

Complaint was made by a man, on account of his discharge from a shop, another man being put in his place. In this

case the complaint was dismissed, as it was found on investigation that the proprietor had good ground for his action.

The men in a certain shop complained that a reduction had been made in their pay. The board succeeded in settling the case amicably by securing an advance on some kinds of work and allowing a reduction on others.

In another case the men in one of the departments of a shop demanded an advance which the proprietor refused to pay; finally the men struck work and left the shop in a body. This action coming to the knowledge of the board of arbitration, they informed the operatives that unless they resumed work at once their places would be filled by others, as it was a flagrant violation of the laws of the order, for any shop's crew to inaugurate a strike without authority from the board of arbitration. In accordance with these instructions, the men quietly returned to their places and no further complaint was made.

The three-handed teams in another shop demanded an advance. The proprietor appeared before the board and explained his position, stating his entire willingness to pay regular prices. Subsequently, in consultation with a committee from the board, an advance for some parts of the work was made, and the trouble was amicably settled.

In another shop, the lasters demanded an advance. The matter was referred to the board, who sustained the men in their demand, and the firm finally agreed to it.

In another case the board sustained the lasters in resisting a proposed reduction, and the firm yielded and continued to pay regular prices.

The McKay stitchers in a certain shop complained of a proposed reduction of their pay on a certain grade of work. The board investigated, and concluded that the men should be sustained. This decision being reported to the proprietor, he receded from his position and continued to pay the former price.

A man complained to the board that he had been discharged from employment on account of his connection with the order of St. Crispin. The case was investigated and dismissed, it being found that his late employer had other and sufficient reasons for his action.

The McKay nailers in a certain shop demanded an advance of price, which the proprietor refused to pay. On the case being investigated by the board, the latter was sustained and the men ordered to continue work at the same rates.

Two firms complained to the board that they had reason to believe they were paying higher prices for some branches of work than was paid by a certain other manufacturer, and requested the board to investigate. The board appointed a committee to ascertain the facts; finding these to be as stated, they reported accordingly. A new list of prices was then drawn up, and the board of arbitration, in consultation with the three firms mentioned, settled the difficulty harmoniously by adopting a scale of prices as nearly as possible in accordance with that paid in other shops for similar work.

Complaint was made to the board by a manufacturer that he had reason to believe that the men in a certain shop were working at reduced prices, and the board was desired to inquire into the case. A committee from the board, accordingly, waited upon the proprietor of the shop mentioned; they subsequently reported the facts to be as alleged, and that the said proprietor stated to them, in justification, that he was manufacturing goods in advance of orders and could not afford to pay full prices under such circumstances; moreover, that the men working for him otherwise would be without employment. The board held that the general welfare was paramount to any individual interests; that, if a reduction in prices were to be allowed under the plea that goods were being manufactured in advance of the market, it would establish a bad precedent. They therefore informed the manufacturer in question that, as others of his class depended upon the board of arbitration to maintain an established scale of prices, he must either consent to pay regular rates, or the board would order the men to leave his shop. The result was that he gave up making goods in advance of orders, and a number of his hands were discharged.

In another shop the proprietor informed his men that he intended to make a general reduction of prices on all parts and grades of work, and that for the future he proposed to make his own bargains with his men without the interference of the board of arbitration or any other outside parties. This

action was opposed by the workmen, and complaint was made to the board of arbitration. A committee from the board waited upon the manufacturer, but they utterly failed to move him from his position. The board, after several meetings and various efforts to compromise the difficulty, finally gave the men leave to strike when they had finished such work as they had in hand. Accordingly, each man, as he finished his job, took his tools and left the shop. Considerable ill-feeling was engendered in this case. Placards from the manufacturer were posted throughout the city calling for workmen, to whom the highest prices were promised. Immediately under these might be seen a card from the board of arbitration notifying all shoemakers that the hands of this manufacturer were out on strike to resist a reduction of pay, and warning all Crispins to keep away from the shop. This condition of things continued about two weeks, when the board of arbitration effected a compromise by allowing a reduction for some parts of the work and securing an advance on others. The men then returned to their work.

A manufacturer gave notice that he intended to make a cheap grade of shoes. The board sent a list of prices to him for such shoes as he proposed to make. He was informed, however, that he would be expected to allow the old prices for his other work. He adopted the list and agreed to the conditions demanded by the board.

The cases which we have given sufficiently exemplify the work the board has to do. They illustrate most of the difficulties which they are called upon to arbitrate. For the last six months the duties of the board have been almost continuous and very often arduous and difficult, involving the exercise of considerable prudence and patience. Meetings have been held as often as required; generally at least twice a week. For attending evening meetings the members receive no compensation; but when they are obliged to spend time during working hours, they are allowed thirty cents per hour for the time actually spent in the performance of their duties.

There seems no present prospect of the establishment of a board of arbitration on the part of manufacturers, to act in conjunction with that of the Crispins. The most obvious

difficulties in the way arise from the nature of the shoe business, subject as it is to continual fluctuations, consisting, as is well known, of short, busy seasons, when every nerve is strained to fill the orders with the utmost possible despatch, as they pour in from all sections of the country, and soon succeeded, as trade begins to fall off, by lulls, during which there is little business in any department. This leads to an intense and feverish competition among manufacturers, precluding any real unity of action except when it is forced upon them by outside circumstances. Not the less, however, has the work done by the board of arbitration shown the value of the principle; nor is it easy to estimate the extent of its services in allaying ill-feeling and preventing strife. It would be absurd to suppose that any body of men could discharge such duties as that of the board of arbitration and escape criticism. However, the moderation, firmness and fairness which the members of this board have brought to bear upon the various cases referred to them for adjudication, have prevented many strikes, and secured for their decisions the respect and confidence of their fellow-workmen, and to a great extent also that of the manufacturers.

As at present constituted, it is composed of men of more than average ability, each of whom has a thorough and practical knowledge of some of the branches of the shoe trade; they are therefore able to consider intelligently the various questions referred to them, while the feeling of immediate responsibility under which they rest is a guarantee that their deliberations will be conducted with coolness and caution.

PART II.

CO-OPERATION IN MASSACHUSETTS.

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The prominent position in social science which the system of co-operation, especially in the distribution of goods, at times assumes, demands of this Bureau the record of all that may throw any light upon the subject or assist in making the efforts of the future more intelligible. There have been in this State since 1840 various attempts to embody the principle, and with varying success. This Bureau, in 1871 and again in 1875, devoted considerable space to its consideration, but no connected history of the efforts has been made; and with a desire to secure the facts, before men now living, who alone could give them, should pass away, we attempted, through Mr. George E. McNeill of Cambridge, a compilation of the records of different societies and the collation of evidence of their officers. Mr. McNeill attended to this duty, and has furnished the following:—

Thorold Rogers, who fills the chair of political economy in the University of Oxford, England, says, "Co-operation, rightly understood, is the harmony of those divergent interests which are represented under the terms capital and labor." To reach this harmony has been and is the struggle of civilization.

Massachusetts, from her earliest settlement, ingrafted into her theory, practice and law the fundamental principles of co-operative control. Her chief corner-stone is laid upon the enduring basis of equality, equity and unity,—equality of right, equity of dealing, unity of purpose.

The Pilgrims, disciplined in a republican church government, forced by necessity into communism in matters of property, easily and naturally adopted the congregational form into their civil policy. With Church and State thus under majority rule, indisputably separated and yet in harmonious accord, it only remained for the Pilgrims to complete the typical Zion by solving the problem of the relations of labor and capital.

In the year 1620 nothing was known of the subdivisions of labor, nothing of machinery as at present understood. The home was the manufactory, the members of the family were the spinners, weavers, tailors and dressmakers. The carpenter and the shoemaker were at their door, needing but few tools, and those were easily made by their neighbor the blacksmith.

With these three trades,—trades among the very last to succumb to the influences of machinery,—the Pilgrims were self-supporting, and could bid defiance to barbarism. Their sustenance must come from the harvestings of the earth and the products of the sea; the earth was free to them, and was easily managed under the industrial or family-help system, and no new departure was needed in that direction, any more than in cooking a dinner, spinning yarn or weaving cloth.

The first industry that demanded congregation of labor and aggregation of wealth was the fisheries; and here the Pilgrim completed the circle of his possibilities. These men, united in motive, method and purpose, found mutual help the best self-help; found that equity in risk, responsibility and profit, like honesty, was the best policy, as well as in unison with good morals and the previously formed habits of mutual government.

The share system in the cod and mackerel fisheries was the first introduction of co-operation in industry, as the establishment of the township on the congregational principle was the inauguration of republican government. Here in this Commonwealth was planted by the Pilgrims the germ of co-operative enterprise.

In considering the vexed question of capital and labor, and

analyzing the proposed remedies, it is well to know fully all of the anterior data, so that the light of past experience and experiments may serve as a guide for the future.

Any attempt to treat of co-operative efforts in Massachusetts without commencing with or referring to the Pilgrim church, the township and the fisheries, would be like a record of the Revolution with Samuel Adams, Lexington and Concord left out.

A New England town in its inception was the embodiment of pure democracy. De Tocqueville says: "The native of New England is attached to his township because it is independent and free; his co-operation in its affairs insures his attachment to its interest; the well-being it affords him secures his affection; and its welfare is the aim of his ambition and of his future exertions. He takes a part in every occurrence in the place; he practises the art of government in the small sphere within his reach; he accustoms himself to those forms, without which liberty can only advance by revolutions; he imbibes their spirit; he acquires a taste for order, comprehends the balance of powers, and collects clear practical notions on the nature of his duties and the extent of his rights."

The extension of the township principle was the new wine of liberty in the old bottles of monarchy,—church, industry and government. Seventeen hundred and seventy-six was the partial fulfilment of 1620. It was a confession and a concession. Virginia and New York had been settled from different motives, by different men of different habits of thought and life. The Revolution was an agreement on their part to try this co-operative experiment on a grander scale,—to enlarge the New England union into the federation. It was a concession that equality was a normal condition, equity a natural law, and unity a principle.

Seventy-six was adoptive, not inventive. The statesmanship and patriotism of that time were required for protective measures. Hence the continuance of chattel labor, the wage system, caste and class distinctions. The township of the Pilgrim rested on an actual equality of condition, consequent not so much upon motive as upon circumstance,—a practicable

equity of dealing; a unity the result of necessity, as well as of habit, custom and motive, and all were welded by a general intelligence.

The adoption of this system by the heterogeneous States was a leap the hazard of which we have never realized, and the result of which it is too early to predict.

In our own State, emigration has destroyed the homogeneous barrier to monarchical forms and systems. Neighborliness often disappears when neighbors have neither religion, habits nor tastes in common. Co-operation is the agreement with disagreeable people for a stated object. The Pilgrim might have so agreed; the Puritan and his descendant, never. They agreed to conquer, never to submit. But not alone the emigrant had broken down the walls of the Pilgrim's Zion. The moral barrier had already given way in the union of the township with the plantation,—a compromise between the share fisherman and the no-share slave that lead to further compromise.

The share and chattel system wedded, strengthened the wage system,—a compromise with equity. Equality and equity thus surrendered, unity was the next and only barrier to the overthrow of co-operative government. Eighteen hundred and thirty-two witnessed the first attempt in the nullification doctrine of South Carolina. Eighteen hundred and sixty, the second, from the same monarchical source. The whole moral power of the wage-labor States was forced into defence of the first principles of republican institutions,—equality of right and unity of purpose. With reconstruction fairly settled, the experiment of co-operatively governed States rests upon the two pillars, equality under the law, and unity to protect the law.

Equitable legislation in this State has been, save in one instance, purely palliative. The excellent paternal and administrative legislation that cares for the insane, idiotic, inebriate, the blind, deaf, dumb and the pauper, that acts as ward for the orphan, that protects the dumb beast, that regulates and reduces the hours of labor of women and children, and attempts to give educational advantages and opportunities to all,—these are the products, not of the co-operative principles of the

Mayflower and the Declaration of Independence, but of the broad humanity of which they are the expression.

The exception is the system of insurance, which is, if rightly conducted, co-operative, neighborly, equitable. The school-house and the town-house remain as the outward bulwarks against the inroads of any encroaching monarchical tendency. Unseen barriers also remain in the habits of thought that establish the standard of living; in the traditions of the fathers; the sobriety, thrift, prudence and intelligence of the people. Lloyd Jones says, "The cure for the evils of co-operation is more co-operation." The only way to hold on is to go forward. True conservatism advances. Co-operation is held on to by past, not present, strength. The grasp will lessen unless younger vigor comes to our relief. While we are rejoicing at the impetus given by the abolition of slavery, the momentum of our past mistakes is not yet exhausted. The political power of the citizen is lessening, both by the annexation of city to city, increase of population without increase of representation, larger patronage to rulers, attempts at less frequent elections, increase of the terms of office in municipalities, biennial sessions of the Legislature, decrease of elective officers, etc.

Industrially, productive and distributive agencies are stimulated to excess, while the power of the citizen to consume has not increased in the same ratio. Capital at one time indulges in the excitement of speculative schemes, at another falls into the stupor of exhausted energies.

Socially, class distinctions have increased. Wealth is aggregated and protected. Poverty is congregated and demands protection. Two classes, permanent and antagonistic: the laborer, poor and ignorant; the capitalist, rich and cultured. On the side of the first are numbers and brute force; on the side of the second, cunning and power. Singly, each class is self-destructive; unitedly, they are constructive. Such is the bane. What is the antidote? No one contends that there is too much wealth. All agree that there is too much poverty. Co-operators have attempted the task of "letting distribution undo excess"; and though the plan is simple, the work is difficult.

The first attempts at the new phase of co-operation—its use in trade—which it has been possible to discover in the brief time allotted for this investigation, were made somewhere between 1830 and 1845,—a seedtime for all such enterprises. The infant steam-power was unsettling past methods and inaugurating new. The productive fever was presaging the incoming of the producers' famine. Machinery, iron-handed, stomachless and brainless, added to the doctrine of Malthus the amendment, that the development of machinery, and not the development of man, was the demand of civilization.

In this country and in England, as well as on the Continent, the minds of many thinking men had been aroused to the importance of a solution of the growing problem, how to adjust the relations of capital and labor. In France, Fourier; in England, Owen; in America, Josiah Warren,—each one proposing a social revolution by different methods. Fourier's was the best accepted dogma with Americans, though Owen found many followers. Josiah Warren had, before this, in 1826, formulated the theory, "That cost was the limit of price," and was at this time attempting to prove it by running a store on that principle, charging only for the time taken in each transaction, under which, as Holyoake says, "A paper of needles might cost as much to sell as a barrel of flour."

Conventions of different associations were of frequent occurrence. The New England Association of Farmers and Mechanics, which held its first convention at the State House in February, 1831, was the first to introduce and discuss resolutions upon the subject of co-operative trading. No action was taken, neither was the subject ingrafted into the ten points of the platform submitted by the committee. The committee appointed to consider the question were unable to agree. One report recommended action, and the other consideration. No further record of co-operative agitation is at hand until 1845, though it must have been a subject of discussion in the numerous labor organizations of the day, holding meetings and conventions monthly and quarterly.

Of the stores prior to 1845, we have no data. The most that can be learned of them, is, that goods were bought in bulk and retailed at a margin above cost to pay expenses; that

the managers were unpaid and unthanked, generally cursed, and always tired out; that when the few zealous members withdrew, the store either went into private hands or closed up.

The community experiments of the Transcendentalists at Brook Farm, and of the Christians at Hopedale, were attempts at co-operation, and were the results of the preceding agitation. At that time men of the highest culture joined hands with the uncultured; Dana, Greeley, Channing and the factory men and women speaking from the same platform, serving on the same committee,—all earnestly engaged in the same movement.

New England Protective Union.

In 1845, after considerable discussion, a store was started in Boston, the first purchases of which were a box of soap and a half-chest of tea; from which small beginning, grew an enterprise that in its best days traded from one to two million dollars annually. This effort was called the "Workingmen's Protective Union." Like all other co-operative movements, it grew out of the agitation of the labor question.

At the convention of the New England Workingmen's Association, held in Fall River, September 11, 1845, the following resolutions were introduced and laid over until the next session:—

"*Resolved*, That there is little and most uncertain power in the present grasping, selfish and monopolizing institutions of society, to develop the virtues, secure the rights, or promote the happiness of the people; that, on the contrary, while the social and political institutions remain as they are, there is an absolute certainty of a constant and rapid increase of vice, oppression and misery destined for them to suffer.

"*Resolved*, That the first inherent rights of man is the right of paternal protection, and that the relation of the parent to the child is the antetype of the true relation that exists between the government and the individual; and that this relation ought to be acknowledged and practically adopted as the basis of all law and government.

"*Resolved*, That, in the judgment of this convention, a resort to the polls is the only practical and effectual measure

which the workingmen can at present adopt for the defence of their rights.

"*Whereas*, All means of reform heretofore offered by the friends of social reform have failed to unite the producing classes, much less attract their attention; therefore,—

"*Resolved*, That protective charity and concert of action in the purchase of the necessaries of life are the only means to the end to obtain that union which will end in their amelioration."

The first division of the New England Protective Union, then known as the Workingmen's Protective Union, was organized in Boston, October 8, 1845, with Horace Seaver for president; C. C. Jones, recording secretary; Henry P. Trask, corresponding secretary; J. G. Kaulback, Jr., treasurer.

These gentlemen had been prominent in the workingmen's associations and labor-reform agitations of the preceding years. As will be seen in the following preamble to their constitution, their purpose was broader than the mere distribution of goods at cost. They said:—

"*Whereas*, There are many of our fellow-workingmen who have so small an equivalent returned them for their toil,—although laboring excessively, to the deterioration of health as well as to the neglect of the intellect,—that in very many cases no surplus remains after the purchase of the necessaries of life: hence indigence; and in the event of sickness, they are not only destitute, but are without that kindness and sympathetic attention to which their case lays claim.

"*Whereas*, Many evils arise from the isolated way in which the laborer, as a man of small means, has to purchase the necessaries of life; therefore, to unite the little fund of the producers, and purchase in season, as do the wealthy class their fuel and groceries, would, it is obvious, secure to them a larger share of their products than they otherwise could; and—

"*Whereas*, We most firmly believe it is the imperative duty we owe one another and ourselves to give all the information in our power to the procurance of sure, steady, and profitable employment, that we may have deeds of genuine sympathy, which not only manifest themselves in relieving the destitute, administering to the sick, but those which strike at the root

of poverty; such as will secure good pay and fewer hours of labor, and thereby in no ordinary degree remove the cause of poverty and sickness.

"*Therefore*, for the better securing of these principles and the obviation of the forementioned ills, we resolve ourselves into an association, and agree to be governed by the following rules and regulations."

This preamble and constitution was printed in full in the "Voice of Industry," the organ of the Workingmen's Association, a paper published in Lowell, and edited by W. F. Young, afterwards secretary of the central division of the union, and from whom many of the facts here given were obtained. In the editorial of the same number, we find this indorsement:—

"By a perusal of this constitution, it will be seen to agree, in all the fundamental principles and objects, with the one recommended and adopted by the National Industrial Convention at New York; and we sincerely hope and trust this union of sentiment and feeling between the New England, Middle and Western States will result in a general organization of the friends of *free labor* throughout the country.

"The objects proposed by this plan are of vital importance to the future prosperity of the working men and women of our land, and the universal good of mankind; for the many sad lessons of the past are ample testimony that the race can not progress in that which christianizes, elevates and perfects, while labor is degraded, and its followers reduced to serfs, slaves and dependants."

A letter in the same paper from Albert J. Wright, Boston, contains the following: "In all the meetings and conventions which the workingmen have held, it has been admitted, generally, that there is a great want of *union* among those whose condition we desire to see improved. This fact has been sincerely deprecated by all hands. There can be no concert of action, or agreement upon modes of action, for want of this union. There has been, naturally, a want of confidence among the producers manifested in regard to a proposal for any general movement designed to secure justice to the masses. The want of *union* has stared us in the face and met us at every turn when we have sought to fix upon any practicable

method to accomplish our purpose. We have seen that the great mass of the working people have been more disposed and better prepared to devour each other, rather than to lend a helping hand. There has been no bond of brotherhood among them; no connecting link between one laborer and another to make them realize the truth that 'we are all brethren.' This want of union has stood before us like an insurmountable barrier to oppose all progress. How to overcome it is now the question. It is a question well worthy the serious and candid consideration of every friend of the workingmen's reform. It is a question which has occupied the thoughts and been the subject of the investigation of a few friends in this city for the last nine months. Unless we could discover some plan, practical and feasible, which would create the much-desired union, we have been ready to despair of ever accomplishing anything for the permanent benefit of the workingman."

The first report of this association contained the following:—

"The board of commerce, having been appointed a special committee, to whom was referred the subject of the difference between the wholesale and retail prices of teas, coffees and soaps, have investigated the subject, and ask leave to make the following report:—"

	Cost per pound, Wholesale.	Price per pound, Retail.	Per Cent of advance, per pound.	Average advance in cents, per pound.
Teas.				
Souchong,	$0 23	$0 36 @ $0 50	86 @ 117	23
Ninyong,	24	40 @ 48	66 @ 141	28
Y. Hyson,	48	58 @ 78	22 @ 66	20
Coffees.				
Java,	8½	12 @ 16	41 @ 88	5½
Maracaybo,	8¼	11 @ 12	33 @ 48	3¼
St. Domingo,	7	8 @ 10	14 @ 42	2
Soaps.				
No. 1,	4½	8	77	3½
2,	3½	7 @ 8	100 @ 128	4
Extra,	5	10	100	5
Settled,	6	12	100	6

This organization grew slowly for the first two years, although it had the indorsement of the numerous workingmen's associations, both state and national. The supreme division of the order was organized January 7, 1847, with Robert L. Robbins, president, Albert J. Wright, secretary and treasurer, with twelve divisions in the union—all but two being in the State. One of the first divisions formed was organized by a few working-women in Lowell. The first statistical information as to number of members, etc., was given at the session of the supreme division, October 5, 1847, in which twenty-five divisions were represented, having 1,993 members. At the first annual convention, January, 1848, a resolution was passed recommending divisions to adopt the cash system. From frequent discussions, as found in the records, it would appear that this recommendation was never fully adopted.

In the second annual convention, January, 1849, it was voted that associations of ladies be organized,—by "request of certain ladies." At this convention the constitution was altered and revised; the name was changed from Workingmen's Protective Union to New England Protective Union, and from Supreme Division to Central Division.

In the April quarterly session of that year, Mr. H. P. Trask offered the following resolution, which was adopted:—

"*Resolved*, That a committee be appointed to carry out that part of the constitution that referred to the organization of industry."

In July the committee on trade was instructed to provide a suitable *dépôt* for the deposit and exchange of produce and goods. In the quarterly circular of that date, is found the report of the committee on organization of industry, from which we take the following extracts, as evidence of the scope and purpose of the original founders of the association. The report is signed H. P. Trask, A. J. Wright, Peter I. Blacker, J. G. Kaulback, Jr., John F. Abbott.

"It is evident that to stop with simply succeeding in the trading department merely, we shall not have accomplished the one-half of the object of our association. Let us for a moment review the proceedings of our society. We commenced with this one *grand idea*, the elevation of the labor-

ing classes. The dollar was to us of minor importance—humanitary and not mercenary were our motives."

"We saw a class of useless agents and money lords fattening upon the products of industry; we saw a system of competition which was beggaring the laboring classes, and operating to the injury of all classes."

"From the want of means we could not at first commence the organization of trade and industry at the same time."

"We were poor (a crime in civilized society); we were ignorant to a *great extent* of the arts and intrigues of trade, but saw enough to induce the undertaking of an experiment, and with faith in God and the right, we commenced our work by the purchase of a box of soap and one-half box of tea."

"Some dozen or more persons commenced in an upper chamber over the Boylston Market (a modest place in these times of extravagance) [October 6, 1845]. From that time we have never ceased to work, and the result has been success—success of the grandest import; it is no longer an idle dream, an experiment, but a common-sense system of conducting trade."

. . . . . .

"Solve, if you can, in any other way the cause of the poverty of the masses, other than the system of competition, which exists in all departments of industrial life; solve, if you can, to remedy this evil, but by the co-operative organization of industry, thus to enrich, elevate and bless our race."

"How is labor-saving machinery to be made to elevate the millions except to compel it to labor for, instead of against, their interest, as at present? Man's muscles and heart-strings are now made to compete with iron machines that need no rest, that have no affections, eat no bread;—is it to be wondered at that man fails to keep pace therewith?"

"Why always working, and but a step in advance of starvation? Why is he who produces everything, not only destitute of luxuries, but of the common comforts of life, to say nothing of a shelter which he can call his own? Beside the starving producer stands the man who never works, but lives and riots in wealth wrung from his half-paid producers, and by this same means makes large donations to colleges,

wrung from the thin, haggard forms in his factories, work-shops or counting-houses."

. . . . . .

"We shall then ask no man how many hours we shall labor, but each will share according to the amount of labor performed."

"We would commend to your notice, as being the most needy, the *seamstress*, with whom to commence the work of organization. Lamentable as is the condition of laboring men, that of the women is worse; and increasingly so, when the newly invented sewing machines shall accomplish all that now gives employment to thousands. Let us take this and kindred machines, and christen them for the good of the race, by shortening the hours of labor, while at the same time we increase the products of labor. Let us then assist in the formation of such an industrial union, that, example set, others will follow. We have a large market already existing, and having the advantage of large purchases, it can but be successful. To doubt is failure,—is rank treason. Give but the proper persons and the means, and the work commences forthwith."

"Slow, indeed, will these persons be in returning to the old methods of civilized industry, having tested the superiority of the new."

These early pioneers were all sound on the slavery question, as the following quotation will show:—

"We point you to three million slaves, clanking their iron chains, sweating blood for poor, miserable bread!"

But they were no less anxious for the white laborers of the North, as is shown by what follows:—

"We point you to the thousands upon thousands that fill our alms-houses, to the anguish and hideous mockery of a life of dependence that follows! We point to the lone streets and garrets of all our large cities, filled with the anxious, careworn, yet unsuccessful seekers of employment!"

"Give employment and the product—we ask no more."

"We do not ask of you the loan of money in your official capacity, to the proposed society; but let such aid be individually rendered, upon good security without interest. Such a

union, finding a market for their goods, for cash, would be enabled to do a large business with but a small capital; the principle being the same as in the trading unions. Thus can the laboring classes get rid of selling themselves to masters for the privilege of work when it is to be obtained."

"Thus work is guaranteed without going to capitalists, hat in hand, for their favors. Such organizations will place men in independent positions, so that tyranny can not say, 'Vote my ticket or leave my employ,' which with wife and starving little ones begging before him, obliges him to succumb."

"It places woman in a position where she can more effectually repel the advances of vicious men; it prevents waste of time and means that now are inevitable, and presents a system of economy we little dream of in these times of 'penny-wise and pound-foolish' policy. Our wretched and disease-breeding workshops will give place to grand palaces, devoted to labor and love."

"In that time coming, there will be no anxious care of where to-morrow's bread is to be had; no poorhouses in old age, with barred gates and grated windows, but plenty and beauty shall be poured into every lap."

"Brothers, shall we content ourselves with the miserable idea of merely saving a few dollars, and say we have found enough? Future generations, aye, the uprising generation, is looking to us for nobler deeds. Shall we disappoint them? No! by all that is great and good, let us trust in the truth of organized industry. Time, undoubtedly, must intervene before great results can be expected to accrue from a work of this character. We must proceed from combined stores to combined shops, from combined shops to combined houses, to joint ownership in God's earth, the foundation that our edifice must stand upon."

From the report of the committee on trade, January, 1850, we learn that "no expenses have been incurred in anticipation of increasing business; but as the receipts of produce and other goods will require it, a larger store will be obtained. The number of persons employed during the quarter has been four permanently and two transiently, making six in all."

In the same year the agent was appointed, and his commission fixed at three-fourths of one per cent for making purchases, and one per cent for selling produce. An assessment of three per cent per capita was made upon each member of the subordinate divisions to pay the expenses of the central division, which up to this time were as follows:—

During the year 1847, ...	$41 38
" " 1848, ...	115 44
" " 1849, ...	42 77
Amounting in all to	$199 59
There had been expended by the treasurer during this time, as appears from approved bills, for the legitimate expenses of the division, .	$258 74
From which deduct the amount received, . .	199 59
And they were indebted to the treasurer, .	$59 15

In July of this year, 1850, the store was found inadequate to the increased business. In the report of the committee on trade, at this session, they say:—

"The subject of distributing the products of labor has occupied the minds of many philanthropists in this country and in Europe, but no system has as yet been satisfactorily tested which would prevent capital from exercising the sole control over the products of industry, and exacting the largest share for merely permitting the exchange of products, by taking advantage of short crops to enhance prices beyond the reach of the mass of the day laborers, and causing privation and starvation; by filling storehouses with the necessaries of life, to be held for higher prices, and which often rot or are otherwise injured while the people are suffering for the want of them. Your committee believe that the system adopted by the union of distributing goods on the cost principle, that is, adding to the original cost just sufficient to cover all expenses, to be correct, and that by the steady co-operation of the divisions in concentrating the funds in one agency, the foundation will be laid for a better and more

equitable system of commerce, which will secure to the laborer the products of his industry."

"That our institution has proved beneficial to the whole community where divisions have been established, is acknowledged in all sections of New England, as the tendency has been to induce the working class to adopt the cash system, and the traders, in their endeavors to compete with the divisions, have been obliged to come into the market with the cash instead of purchasing on credit."

In October, the secretary of the central division issued a circular to the subdivisions, in which he says:—

"The committee believe that much may be saved to the farmers and mechanics, by a better understanding and a closer communication with each other; as there is no good reason why a farmer, living one hundred miles from Boston, should send his butter and cheese to Boston when it is wanted in a manufacturing town within five or ten miles of his residence, as the whole expense of transportation, commission, etc., back to the manufacturing town are all paid by the farmer. The committee are fully aware that it is the work of time to eradicate the old notions of buying cheap and selling dear, without any regard to the amount of labor endured or expended in the production of an article. If agricultural labor is the most useful to the community, it should be able to command the labor or services of every trade and profession on equal terms."

The circular, after giving the condition of trade and the upward tendency of most articles in the grocery line, urged the subdivisions to deposit a certain percentage of their capital with the committee on trade, in order to assist the agent in his purchases. In the infancy of the institution the agent had used his private funds to assist new divisions, but with the rapid increase of trade, these were wholly inadequate.

At the October session, a resolution was introduced and rejected, recommending subdivisions to petition their legislatures for the passage of a general incorporation law for manufacturing and mechanical purposes. It was also voted to hold semi-annual sessions.

The anti-slavery agitation had taken a deep hold upon this band of reformers, as the following resolution presented by Mr. Trask, and adopted, will verify :—

"*Resolved*, That in the opinion of the central division, now assembled from all parts of New England, we hold that all men are born free and equal, and that the recent act of Congress, giving up our fellow-workingmen to the slave-hunters of the south, dispensing with the trial by jury, and making it criminal to do good to our fellow-workingmen, *is an infamous act, fit only to be trampled under the feet by every lover of justice and liberty;* and we pledge our lives and fortunes to its overthrow and final repeal."

They also voted to petition for the passage of the homestead exemption law.

The statistics of trade up to this time are as follows :—

Year.	For the Quarter preceding	Amount.
1848.	Jan. 1,	$18,748 77
	April 1,	24,359 02
	July 1,	33,000 00
	Oct. 1,	36,400 00
1849.	Jan. 1,	40,910 24
	April 1,	49,601 14
	July 1,	60,439 00
	Oct. 1,	69,851 22
1850.	Jan. 1,	102,353 53
	April 1,	126,301 92
	July 1,	150,831 30
	Oct. 1,	155,851 81
1851.	Jan. 1,	180,026 47

An analysis of the returns to the central division for the year ending December 31, 1850, gives us the following: Number of divisions formed, 106; 83 returned a membership of 5,109, and 84 returned a capital of $71,890.36, the highest amount held by any one division being $2,765.51, the lowest $150—an average of $855.63.

Sixty-seven divisions reported having purchased through the central agency, for the preceding quarter, $102,341.04,

an average of $1,527.47. The same number of divisions purchased through other sources, during the same time, $136,715.79, an average of $2,040.53.

The amount of sales for 73 divisions for the year ending December 31, 1849, was $638,636.74, an average of $8,748.44.

The largest trade made through the agency by any one division was by No. 55, New Bedford, now in existence under the name of Central Union; during the last quarter of 1849 the trade of this division amounted to $6,269.89, on a capital of $1,422.63. This same division made total sales for the year of $31,278.64.

No. 17, Lawrence, purchased but $283 of the agency, and $11,772 from other sources. Their total sales amounted to $27,295. The largest total sale for the year was made by No. 16, Lowell, amounting to $39,918.90. This division made no purchases from the central agent for that quarter. Their capital amounted to $2,645. The largest per cent gained was on a capital of $808. The total sales amounted to $32,333, thus turning their capital forty times in one year.

At the January session, 1851, Mr. W. F. Young was elected secretary and treasurer.

At the April session, the committee on trade reported that considerable uneasiness prevailed in the matter of the sale of produce. Certain unauthorized parties had issued circulars that they were authorized to sell produce for the union. The purchases by the agent for the preceding quarter amounted to $181,633.16. A lady had also been engaged to purchase fancy articles.

The annual meeting was changed from January to October.

The committee on trade felt compelled to call attention to the growing distrust among the subdivisions. They say:—

"The agent can be of but little service to divisions who [sic] may be constantly jealous of his designs, or ready to impeach his motives in every instance where their expectations or fancies are not fully realized, and by cherishing such feelings they make themselves over-exacting, greatly to their own injury as well as his."

"The relation which the subdivisions sustain to the central

agency, renders it highly important that the most amicable feelings exist between them at all times, which will not only tend to cement together and ennoble our fraternity, but also add in no small degree to our pecuniary advancement."

It will be seen from the following extract that they were not ignorant of the danger that would come from the failure to concentrate their trade. They say:—

"Your committee regret to learn that some of the subdivisions are in the habit of purchasing many of the common staple articles of merchandise on their own account, and ordering from the purchasing agent but a mere pittance of their bills, and that of the most difficult and perplexing character. The members of this union, we think, must be aware that the commission granted the purchasing agent is very small, and that should the course taken by some, as above referred to, be generally pursued by the divisions, it will become necessary in order to do justice to our agent, that the board of trade affix a discriminating ratio to commission the different classes of goods."

In their annual report, October 1, 1851, they say:—

"A large majority of the divisions are enjoying a good degree of pecuniary prosperity, and are well satisfied with our efforts in their behalf, constantly aiding us in our labors and encouraging us to new plans for making the power and usefulness of our institution felt, while a few others seem to entertain the idea that they owe the union no obligations whatever, and are not unfrequently found joining hands with its most insidious enemies. Such a course, if pursued to any considerable extent, must not only seriously diminish the influence of the central purchaser in the market, but also create discord and jealousy among the divisions, and finally lead to their dissolution."

The amount purchased through the agency for the nine months ending at date was $619,633.16.

The next session was held April, 1852. The committee on trade reported that "every effort to draw trade from the regular constituted agencies should be met with decided disapprobation by the friends of the union, as our strength and

success depend upon united and co-operative action. It is hoped and confidently believed that sufficient intelligence and loyalty exist among the various subdivisions to resist all such attempts to destroy our concentrated efforts, and that we shall continue to present a united and harmonious phalanx in this great work of commercial reform. Experience has fully shown that there is no safety for protective union on the enemies' ground, and the more we yield to the 'tricks of trade,' the weaker we become in building up an institution which shall stand against all the craft and caprice of speculation and commercial rapacity. Abundance of testimony can be presented to show that those divisions which have proved truest to the union have proved truest to themselves, and become the most permanent and successful."

The next statistical returns we find in the "Journal of the Protective Union" for October, 1852, by which it appears that the number of divisions had increased during the preceding twenty-one months from 106 to 403. The amount of purchases had increased to $1,095,247.94; 167 of the subdivisions reported a capital of $241,712.66, all but two of which gave total sales for the year ending October 1, 1852, amounting to $1,696,825.46.

What the amount of business of the remaining 236 divisions may have been, or what proportion of that number had failed or closed up, does not appear in the record; but that some had failed, at this time, is a matter of history.

The journal from which we have quoted, says:—

"By taking a cursory view of the past, we find that the chief reason of the failure of some of our divisions-stores is the incompetency of the persons having charge of them; by this it should not be understood that many have proved losing concerns—far from it; most of them have been, and are, in successful operation."

In the same article, they say: "It is not always those who work cheapest that prove the best bargains."

The board of government, in their annual report, say:—

"The success of the Protective Union, as with all enterprises having for their object the good of mankind, depends upon two important requisites,—correct principles and the

proper persons to carry them forward. In our principles we have unshaken confidence, strengthened by every day's experience, and it is hoped that our movement embodies the spirit and devotion which shall render it proof against internal imbecility and corruption, and external aggressions."

"The future of protective union depends upon *men*. Especially should all its offices be filled with those who combine practical business talent with enlarged views of human rights and human duties. We want no mere fanatics to lead us on to nothingness—persons who ridicule the plainest truths of political economy because above the reach of their mental vision, and deny the existence of the very stars because they can not see them at noon-day."

"On the contrary, our enterprise requires men who, while they do not forget that they belong to the earth, and are therefore earthy, are not afraid to look upward and onward, seeking for new opportunities to render themselves and their cause useful to the world."

"While we should guard against the mere enthusiast and theorist, who would impose upon the child the duties of mature years, let us not forget that youth and manhood may be dwarfed and crippled by the swaddling clothes of infancy. Ours is a practicable and humane movement; let us conduct it as practicable [sic] and humane men."

In 1853, the complaints that had been multiplying for the past two years, took active opposition to the renomination of the purchasing agent, and he resigned, by request of the committee on trade, in January of that year, and another was appointed to fill his place, the former agent promising to take a subordinate position. After a few months he called, or there was called in his interest, a special meeting, at which the board of trade were instructed to appoint two purchasing agents, the former agent as one of the two.

The committee on trade, at its next meeting, believing the action of the special session unconstitutional, and as the former agent had already opened headquarters on his own account, declined to recognize him. Then commenced a battle of circulars that would furnish interesting reading as a history of co-operative efforts, but which hardly comes within the scope of this investigation.

From this time definite statistical information of the branch under the old agent is not accessible. Both branches claimed to be the original,—that agreeing with the old board of trade continuing as the central division, and the other adopting, some years after, the name of American Protective Union.

Immediately after the division of 1853, a circular was issued by the board of trade, asking the subordinate divisions to assist in the publication of a "Journal of the Protective Union." This seems to have been favorably responded to, and was published under the direction of the board of government. In number six, we find an account of the proceedings of the central division, dated October 6, 1853. At this session the central division was reorganized. Albert J. Wright of Boston was elected president; W. F. Young, secretary. Delegates from fifty subordinate divisions were in attendance.

In the report of the board of government, we find a return to the early principles of the organization. They say:—

"The present system of commerce, like the feudalism of the Old World, taxes the laboring many to support the idle few. While commerce revels in luxury and elegance, adding little or nothing to the true wealth of the land, labor, the producer of everything useful, is overworked, stands unprotected in the market places, and is poorly represented in the legislative assemblies."

"Equality of rights can be but little less than a byword and an unmeaning flourish, unless it confers equal opportunities to labor, and equal enjoyment of all the social, intellectual and commercial results of labor. To labor, justly belongs the first fruits of industry. The working classes are the only rightful heirs to the products of their own hands, and the varied achievements of their physical and intellectual powers."

"In view of these considerations, it becomes the friends of the Protective Union at all times, and especially on the present occasion, to make the success and perpetuity of their cause a paramount object. Personal ambition and preferences, and party rivalry, should not be suffered to invade and disturb our deliberations. Our institution was not established to confer favors, but to secure rights; not to build up sine-

cures, but protect all useful members of the community from the unjust exactions of modern commerce."

"The history of the past warns us to guard well our institutions against the schemes of self-aggrandizement and personal aspirancy [sic]. All popular governments and associations, however correct their principles or however honest their supporters may be, are liable to be invaded by ambition and love of power."

"The members of the various subdivisions of the union owe allegiance to the particular divisions with which they may be directly connected, and should never allow self-interest to overrule their regard for the general good. The same may be said of the subdivisions, as they hold the same relations, in point of principle, to the central organization, that the members of the several subdivisions do to the organization of which they are members. Ours is a confederacy to promote individual and general good by collective action, and to secure *either* we must be true to *both*."

"It is to be regretted that some of the divisions are disposed to adopt the policy of joint-stock companies, of selling goods at considerable advances and declaring dividends among the shareholders from the proceeds, thus perverting the original purposes of the union. The design of the Protective Union is not to make, but to *save*, money, and the profits which, under the old system of trade, went to swell the coffers of the exchanger and speculator, belong, under the new, to those who buy the goods."

"All saved by the union system of trade, above what is required for the safe and economical management of union stores, should go to the consumer. Connected with this is another subject, which has been the cause of frequent embarrassment to the government in the discharge of their official duties, and which calls for consideration. We refer to the frequent efforts on the part of individuals, now that the union system of trade is somewhat popular, to seek a connection with the union to gain some local or personal advantage, without conforming to the spirit or purposes of the constitution. The government has been often called upon, by letter and otherwise, by those who seemed to suppose that all the central division had to do with petitioners for new organizations, was to assign

them a number, and give them a license to sell more goods, and more effectually fleece the people than they could under the old system of trade, and thus have their schemes sanctioned and sanctified by the union."

"It is hoped, for the safety and perpetuity of our movement, that all such efforts to divert the influence of the union from its original object will meet with a steady and decided disapproval, and that the New England Protective Union will continue, as heretofore, the people's cause, through which they shall be enabled to limit the profits upon necessities [sic], and add to the comforts and blessings of labor."

The board of trade, in their report, referring to previous trouble, say:—

"It is with feelings of sincere regret that we are compelled to say that the bond of union is broken, and discord is in our midst; that that brotherly love which has been cherished, one toward another, has been exchanged for rancor and hate. Those who have been the warmest friends have now become the bitterest enemies. Those who have professed an eternal allegiance to the interests and welfare of the New England Protective Union, never seeking for place and power only as it might advance the union, are now arrayed in open hostility to your central agency, seeking to undermine the firm basis upon which it had rested, proof against all the designing machinations of merchants, but tottering from the oft-repeated sallies of its pretended friends."

They report that the amount purchased by the agent from February 3 to date, October 6, was $644,809.88; amount of produce sold, $50,000.

The same organization, under report of October 1, 1855, gave for the year ending at that date, amount of purchases, $870,607.25; sale of produce for members of subdivisions, $74,702.64. Aggregate business, $1,130,719.29. Number of divisions reporting, 72, with 4,527 members. Capital invested, $203,564.21.

The next session was held October 1, 1856. The amount of purchases for the year preceding was $828,692.56; amount of produce sold, $39,968.93. Sixty-three divisions reported 3,584 members. Capital invested, $130,912. Amount of trade for year, $1,005,882.02.

In the report of the board of government, they review the advantages of the union system, claiming that a poor man is able to save ten per cent of his earnings, and give this picture of the moral bearings of the system.

The "Journal" says: "The present system of trade is corrupt and corrupting. It ingulfs our young men in reckless extravagance and crime, the painful evidences of which may be seen on every hand,—in town and country, at home and abroad, on sea and on land. Its rust is upon the hearts of our old men, while those in middle age are weighed down by the lusts of its ambition. It bribes our statesmen, holds censorship over our pulpits, and fills the land with the cant and flatteries of a venal commercial press. Rome, in the midst of her pride and splendor, fell a victim to her commercial excesses. Let us beware! Justice to useful, productive labor, is the fundamental idea of a true republic. Political economy which fails to recognize the essential primary relation which exists between production and consumption, independent of all commercial devices, is a counterfeit and a sham."

"The New England Protective Union ought not to fail of its real mission, and prove false to the spirit which gave it existence. The immediate advantages which accrue from union stores, by the way of trade, however important and needful, in themselves considered, are petty and insignificant in comparison with the philosophy which underlies the movement,—a philosophy, perhaps, hardly thought or dreamed of by the mass of its beneficiaries."

"If this organization takes deep root in the moral and social structure, drawing life and strength from the immutable principles of universal and impartial justice, it will become a vital, living spirit, and do much, not only to mitigate present wrongs and privations, but also render important service to the cause of man's permanent social, moral and political elevation."

"On the other hand, if narrowed down to the mere idea of present saving,—seduced from its high purposes by the spirit of speculation, or the croaking of pretending but false friends,—it will become merged into the present commercial Babylon, and gradually die out, leaving an inglorious record of the infidelity of its advocates to truth and duty."

The prediction in this concluding paragraph proved true. In a copy of the "Journal," dated September, 1857, we find the following statement of the difficulties which the union encounters:—

"The management of union stores, we regret to say, has not always fallen into competent and judicious hands, a circumstance not unheard of in connection with all human enterprises; and in consequence thereof distrust, dissensions, embarrassments, adoption of the credit system, and finally 'selling out and closing up' have followed."

"The most grievous hindrance to the success of union stores, thus far, has been the employment of incompetent, unfaithful and scheming managers and clerks,—often men destitute of correct business habits, unfriendly to the principles and objects of the organization, and given to trickery and craft. Stores, under such management, will soon break away from the safeguards of the system, and gradually run into the old channels of trade and the adoption of the credit system, with all their uncertain and ruinous consequences, and finally 'blow up,' as they ought, being nothing but shams."

Another difficulty of the stores was stated by Mr. Devereaux: "He wished to offer a word in relation to the suicidal tendencies which exist among union stores to break away from the central idea, thereby weakening themselves and the whole movement. He believed a too general disposition prevailed among the divisions to listen to the advocates of the 'old-line' system, and that the 'tricks of trade' were working mischief among union stores."

The American Protective Union was a branch of the New England Protective Union. The agent of this branch informs the writer that the total sales of the several years, to 1859, were as follows:—

1853, . .	$1,100,000 00	1857, . .	$1,400,000 00
1854, . .	1,536,000 00	1858, . .	1,400,000 00
1855, . .	1,400,000 00	1859, . .	930,376 36
1856, . .	1,492,000 00		

The only printed report which we have been able to examine of the American Protective Union, was that holding its session in New York, September 14, 1859. At this ses-

sion but 36 divisions were represented, although the agent reported the purchases of the division to amount to $930,376.36. An attempt to find the number, standing and character of the subdivisions proved unsuccessful. The board of government believed there were 600 stores doing business on this method. They presented, as the great problem for solution, the question, What measures should be taken to secure the co-operation of subordinate divisions?

Their expenses for the year were $95.05; income, $143.45. From 1853 to this date this branch seems to have done nothing in the matter of the organization of industry, or the agitation of the labor question, or spread of co-operative literature. At this session the committee on trade called the attention of delegates to the fact that the idea of pecuniary gain occupied but a very limited place in the minds of the original founders or advocates of the institution.

In the report of a special committee, made at the same session, the object of the organization is said to be, "It is an association of American citizens, seeking to accomplish an economical reform in the trade system, by simple yet practical means,"—thus having narrowed itself down to trade purposes only.

As this report contains a very excellent synopsis of their theory and method, we quote:—

"The means of dispensing and enjoying the available privileges of this organization are to bring into operative exercise so many of the powers of the human mind as are necessary to accomplish the necessary supply of human wants for necessary convenience, or even the enjoyment of luxuries, with the least possible expense between the producer and the consumer. To do this in the most successful manner 'protective union stores' are created, and trusty men put in charge of them, and a concentrating of capital and trade is made by men generally of moderate means; agents are appointed, whose duties are expressly defined by written rules. These divisions (as they are nominally termed), or separate mercantile establishments, dotting almost every place where there is sufficient enterprise and sagacity among the people to take any measures for self-protection, were, in their early stages, rather in the character of an experiment; but that day has

long gone by, and it is now known with an illustrated certainty that an establishment founded on these principles, and managed by sagacious and honorable men, will not only succeed triumphantly in any civilized community, but will be the means of dispensing pecuniary and social blessings on members fourfold greater than can be derived from the same amount of capital invested and managed in the ordinary mode of mercantile transactions. Experience, however, has had the effect to suggest some little improvements in the practical workings of this system."

"In its early stages it was thought even unwise to extend its privileges to any other than those pecuniarily interested in its operations, thus excluding all but members and their families from participating in the trade; but this restriction was soon found to be both illiberal and unnecessary. A more philanthropic spirit prevailed, and admitted an extension of trade to any party making prompt pay on an amount of profit equivalent to cover all necessary expenses and incidental liabilities in conducting the affairs of the institution. This plan has been eminently successful and beneficial; and is yet deemed the true policy in arriving at success, and accomplishing the grand object contemplated by the originators and promulgators of the system."

They state that their object is a compound one:—

"1. They would place themselves and their coadjutors in a position to enjoy all the necessaries of human life at a price as near as possible at prime cost."

"2. They would teach their contemporaries the true method of extricating themselves and their posterity from the prevailing pecuniary evil of extended mercantile credit."

They also state some of the errors into which the division had fallen to be in the method of applying their percentage in the sale of goods. Having decided that the goods must be sold at a specified profit on their cost, they applied a definite proportion of such profit on every article, without considering the ability of the article to sustain the price.

The committee recommended a general discriminating application of percentage. They also state that it is common to make a discriminating distinction between inside and outside trade. They confess that all are looking forward to an

annual dividend, "which," they say, "in any social or pecuniary enterprise appears to be so congenial with the sympathies of man's fallen nature that it appears to possess almost the property of an electric spark, dispensing vitality and energy," and they suggest whether it is well "to haul so close in the wind of philanthropy as always to be endangered by the breakers of deficiency, or, by some misfortune, to dash on the rocks of bankruptcy."

From the first, the order was wholly opposed to the use or sale of intoxicating drinks, as will be seen by reference to qualification for membership, which contained this clause: "That persons must be of good moral character, who do not use or vend intoxicating drinks."

In a pamphlet issued by the chairman of the committee on trade, 1856, the writer gives as the two most serious evils of our republic,—intemperance and the credit system. He says: "If the man who has imbibed the habit of an occasional or habitual indulgence of an appetite for an intoxicating beverage could by any means, either persuasive or restringent, be induced to abandon his cherished cup, he would be entirely free from the danger of becoming an inebriate. His mind would be left at full liberty to perform the functions for which it was designed by the economy of nature. His health would never be impaired by the deleterious influence of the poisons of alcohol on his digestive and vital circulative organs. His social relations would never become embittered, reprehensible and unsupportable by the evil effects of intoxication on his intellect, his conjugal propensities or his irritable human passions. His fireside associations would never become changed from that of the confiding friend, the endearing husband, the protecting father, and honored social citizen, and defender of his country's rights, to that of the treacherous enemy, the repulsive intruder in the bosom of his family, and a pest and outcast from the bands of society, and finally, as a last resort, for relief, to become the occupant of a drunkard's grave."

"But another evil, not much less important and equally remediable, which has long hung over and darkened our political [redacted] ecuniary prosperity, is that system of [redacted]nce of extended credit, so sought for

and practised in the general mercantile transactions of the citizens of the country."

"As the manufacturer of intoxicating beverages pampers the appetite of the credulous, habitual drinker, stimulating him to the belief that a little further indulgence would animate his spirits, and render him more active and buoyant; so the wholesale merchant plays upon the credulity of the retail dealer, prompting him to indulge in the snare of an extended credit, with the sole view of vending an excess of goods at an excessive profit, thinking that by so doing a larger amount of trade may be secured to his probable advantage. And as the retailer of the liquid poison, whether in the splendid hotel or the diminutive groggery, trifles with the health and happiness, as well as the peace and prosperity of the inebriate, unmindful of any higher rule of moral honor than the advancement of his interests, or the demoniac disposition to bring his unsuspecting victim to the same immoral level with himself; so the retail dealer in merchandise is prompted to stimulate the vanity of the honest consumer to gratify indulgence in extravagance and unnecessary display of false appearances altogether hostile to his true interest, looking upon frugality and economy as mere commonplace abstracts, until an amount of indebtedness is accumulated beyond his power to cancel without ruinous sacrifice, when the reflection plays spasmodically on the equanimity of his reflective and reasoning faculties, making him morose and petulant by the weight of his disappointment; his social habits undergo a radical change in the common civilities of human intercourse, and too often the exhilarating associations of the grog-shop are vainly resorted to, to stifle the horrors of disappointed ambition; and the once abstemious and industrious fellow-citizen and his confiding family dependents are brought to the necessity of submitting to bankruptcy, and falling into disgrace and hopeless poverty, or of attempting to rise again from penury at a stage in life less promising than that from whence they have fallen by means of the misguiding system which has led them astray in the morning of their active life."

No reports of later date are at hand. The secretary of this branch says that he assumed his [illegible] zation was in its last stages. Man[illegible]

any distinctive features; meetings were omitted; credit was given and taken; shares were held in fewer hands, and the usefulness of the organization ended.

In a review of the causes of its downfall, it will be found that the first disagreement seemed to be upon the qualifications of the purchasing agent. It was the duty of the committee on trade to select and recommend a faithful and competent person to act as agent in making purchases, and to superintend the mercantile interests of the union.

The committee of 1853 claimed and were known to be friends of the agent. They first attempted to harmonize the conflicting interests already existing to an extent that threatened a division among the very pioneers of the union. They gave a hearing to the complainants, and afterward recommended the reappointment of the agent, subject to the condition that he was to carry out certain recommendations submitted by them. In the month of January, they were again called together by the agent, and found that their advice and recommendations had been almost totally disregarded or neglected, and that some of the dissatisfied among the complainants had taken preliminary steps toward the establishment of another agency.

The committee then commenced a more thorough examination, lasting four days; the result of which was the request for the agent to resign, to which he reluctantly consented. One of his intimate friends was appointed to fill the vacancy, and the former agent was offered any situation suited to his tastes and wishes, at a liberal salary.

In February, the agent addressed the subdivisions with a circular, thanking them for past kindnesses, and asking for settlement of accounts, giving notice of his resignation. This was followed by circulars from several of the subordinate divisions, denouncing the board of trade, and sustaining the past agent Other divisions took up the matter in favor of the board of trade, in which an enumeration of the disqualifications of he past agent is given, and indorsing the integrity of the board of trade.

March 16, a special session of the central division convened. It is said that the delegates came together "more like exasperated combatants seeking personal revenge, than wise

men assembled to legislate for the good of a great institution. After a session of two days, it was—

"*Resolved*, That we, the delegates of the several subdivisions here represented, utterly disclaim any intention to impugn the motives which influenced the action of the board of trade in requesting the resignation of ——, however unfortunate we may regard it. That, as a board, we give them full credit for manifesting in their action an honesty of purpose to prevent a schism in the union, and a commendable zeal to promote its best interests,—to enlarge its borders and strengthen its stakes.

"*Resolved*, That we have now (as we always have had) entire confidence in the integrity, ability, untiring energy and efficiency of ——, as exhibited in the discharge of the arduous duties of purchasing agent for the union up to the date of his resignation, reaching from its infancy to its manhood.

"*Resolved*, Therefore, that while we much regret his resignation, that we respectfully request of the board that he may be again called into the service of the union as purchasing agent."

They were further instructed to recommend two persons as agents in the city of Boston, one in the city of New York, and one in Portland, Me.

At the April meeting of the committee, it was ascertained that the former agent had already opened an agency, and the committee sustained their previous action, ignoring that of the special session on the plea of its unconstitutionality, section 2 of article 3 defining their duty to be "the establishment of one office and appointment of one agent for the city of Boston."

On March 17, a meeting was held in Boston by some of the delegates to the special convention who were favorable to the former agent, at which a provisional or advisory committee was appointed to carry out the will of that session in reference to the re-employment of the old agent. He was requested by these gentlemen, representing, as they said, certain divisions who would no longer trade through the agency established by the central division, to open his office at his old stand, the other agency having been removed to another place.

The committee on trade held another meeting, April 27,

28, 29, the proceedings of which were printed and forwarded to the different subdivisions, together with a lengthy statement of the situation. This action called for still more circulars denunciatory of the board of trade, and replies were made that widened the breach. This was continued by circulars from 1853 to 1858, and a competitive struggle was made for the trade of the different subdivisions by the antagonistic purchasing agents.

The New England Protective Union, as an organized effort for the amelioration of the working classes, practically ended in 1853. As a co-operative effort on the joint-stock plan for the concentration of trade, it succeeded in part, probably up to 1857 or 1859. For four or five years after this date, a fair amount of goods was purchased through the several agencies.

Many of the stores continued the old sign, though generally they were the property of the storekeepers who had from time to time bought up the shares. Some few stores yet remain conducted in about the same manner as formerly, the most remarkable case being one located in Worcester, doing a business of about $200,000 a year. The members of this division are mostly well-to-do people. An account of one at Natick is given farther on. Other stores, organized under the New England Protective Union banner, have since been incorporated under new names; the remainder are things of the past.

The War of the Rebellion had a considerable influence in hastening the demise, or rather the burial, of the organization. In some of the country towns, where farmers were the larger shareholders, they became disturbed and frightened, and very gladly sold out to the storekeeper.

Boston Tailors' Associative Union.

This organization was formed in 1849. Its object, as set forth in the constitution, was to provide labor for each other by the manufacture and sale of clothing of every description, and the purchase and sale of such other articles as are generally sold at clothing stores. The board of directors were given the power to appoint and discharge the assistants, and all the powers of administration. The shares were $50

each. Any person working in the store three months, and having paid all demands, and being a member, had a vote in the division of the profits; all other persons (not workers) who invested money in the enterprise being considered lenders, and not entitled to vote. No member not being one of the board of directors could interfere in any way in the business of the store. The right of complaint was granted, but it was to be made in writing. An account of stocks was taken annually, and the profits divided according to the amount of labor performed. They sold for cash; each article was plainly marked at the lowest price; any salesman asking more than this price was to be discharged. Large, lofty, well-ventilated workshops were to be procured, water was to be brought into the building, and washbowls, towels and baths provided; no member to be allowed to work more than ten hours per day. This organization existed a few years.

From 1860 to 1864, little or no attempt was made in the direction of co-operative distribution or production.

The trades' unions had continued their organizations, and established a trades' assembly in Boston, composed of delegates from their several associations.

Out of this organization grew the Boston Labor Reform Association, which established its office at 221 Washington Street. Their first circular was headed, "Labor Reform—The *Discharge* of all Useless Middle-Men, and the Abolition of all Useless Working Hours."

This association was sustained by private subscriptions of workingmen in Boston, Fitchburg, Taunton, Winchendon and Portland, Me. They issued circulars and addresses, from one of which we make the following extract:—

"We are to organize, of course, in harmony with the real interests of society, which are, first, a more rapid increase of wealth; and, second, its more equal distribution. The great task is to set all idlers to working, and all workers to thinking. The common mistake is in stating our difficulties as a conflict between 'capital and labor.' New England supports more than 85,000 middle-men or merchants, twice as many as necessary. Suppose each one costs $400 a year, in time, rents and fixtures, the amount saved in discharging one-half

would be $17 to every man, woman and child in New England, or an aggregate of more than $17,000,000. The burden of their support falls heaviest upon the cities. They cost Boston $33 per inhabitant a year, if $1,000 is allowed for time, rents and fixtures for each middle-man.

"Aside from custom-house duties, New England paid in taxes to the national government, for the year ending June 30, 1863, *about half* as much as she pays to her *useless* middle-men. They can be set to *producing* by good management,—not, however, by clamoring at the avarice and heartlessness of capital, nor by thoughtless people flocking from store to store, buying just enough at each to keep them all in existence, but by organizing and concentrating their trade upon a few who are capable of doing all the work of distributing, and turning the rest to productive labor."

The circular suggests a systematic exposure of cost and sale prices, and the establishment of a farmers and manufacturers' exchange in the interest of workingmen; and concludes with a brief statement of the argument for a reduction of the hours of labor.

Their first attempt at co-operative distribution was in the sale of coal. From their circular of July, 1864, we give the following terms: —

"To all union men, widows and wives of union men, and widows of soldiers, 75 cents less per ton than the market rates. To all mechanics and laboring men, *not* members of any union, 50 cents less per ton than the market rates": by which it is seen a preference is given to union men.

Their second attempt was in the sale of produce, flour, etc. Their method was to furnish tickets to every member of those societies connected with the association, containing name of holder, the amount, date and number of months for which it held good.

On the reverse side was contained the name of the articles, place of sale and explanation of ticket. It also contained on its face the following sentences:—

"The comparative poverty of the real producer is traced to his support of a large and increasing number of non-producers standing between him and the consumer."

"The comparative ignorance of the producer is accounted

for by the little time left for study and thought after ten or more hours' labor in producing."

In the coal business, their plan was to concentrate trade by leaving all orders for coal with the agent, who, with this advantage, could make it possible for the three or four dealers receiving all his orders to sell cheaper than the regular rates.

In their coal circular, they say :—

"Concentrate your trade by buying through the workingmen's agent. If it succeeds, it may be ranked as flank movement No. 1, of labor upon unproductive capital. Productive capital and labor are natural allies. The success of this movement ensures a still greater reduction in the price of coal than will be possible to secure in the first attempt. Union men and all interested in a 'closer relation and co-operation between producer and consumer' will favor this, the first systematic effort on the part of workingmen to lessen the number of 'useless middle-men.'"

In 1865 they were incorporated under the following Act :—

"SECT. 1. Ira Steward, Bartlett J. Brown, George H. Mills, Charles W. Livermore, their associates and successors, are hereby made a corporation by the name of the Boston Labor Reform Association, for the purpose of improving the condition of the mechanic and laboring classes in their various occupations by imparting scientific and practical knowledge of the same; as also their general improvement by the diffusion of knowledge through lectures, libraries and such other means as may be applicable in the city of Boston, with all the powers and privileges, and subject to all the duties, restrictions and liabilities set forth in the general laws which now are or hereafter may be in force relating to such corporations.

"SECT. 2. Said corporation may hold real and personal estate to the amount of twenty-five thousand dollars, to be devoted exclusively to the purposes aforesaid.

"SECT. 3. This act shall take effect upon its passage."

This association continued its agitation, in connection with the sale of coal, by publishing tracts and pamphlets, one of which was "Holyoake's Moral Errors of Co-operation."

It continued active operations for a year or more. It declared "strikes expensive, unsuccessful and incompatible with a moral movement invoking legislation and public sym-

pathy, and as tending to discourage, rather than encourage, the investment of capital in productive labor." It defines its real powers to be in moral means alone.

About this time co-operative stores were formed in Boston, Roxbury, Charlestown, Chelsea and Fitchburg.

The Roxbury experiment continued for several years, at times paying very large dividends, but finally becoming the property of one individual. The Charlestown store had a longer existence, and was conducted on a near approach to the Rochdale plan. Its failure had a very discouraging effect on other enterprises. The Chelsea store was for some years very successful, and continued its existence longer than the others.

Some of the active members of the Labor Reform Association were also members of the co-operative stores, and, strange as it may seem, some of these stores were in active competition with the association in the sale of coal, the purpose being to still further increase the dividends to the shareholders, the effect being to create discord and destroy the usefulness of each.

On the demise of these associations, the active agitation for a reduction of the hours of labor was resumed; associations were formed, conventions held, and certain labor legislation effected.

The co-operative spirit again revived, this time many societies adopting the system of the Rochdale Equitable Pioneers of England. The following are those of which we have any record: Sandwich Workingmen's Co-operative Association, organized November 3, 1866; South Reading (now Wakefield), November 28, 1866; Acushnet (New Bedford), November 1, 1867; Lynn Workingmen's Co-operative Association, September 5, 1867; Fall River Workingmen's Co-operative Association, November 15, 1866; Cochituate Protective Union, March 30, 1868; Gardner Co-operative Association, May 30, 1868; Lynn Co-operative Grocery Company, November 25, 1868; Charlestown Co-operative Manufacturing Association; Florence Mercantile Company; Medford Citizens' Union Store; Taunton Co-operative Association; First Worcester Co-operative Grocery and Provision Association; New Bedford Workingmen's Co-operative Association; East Abington Union Company Co-operative

Store; Natick Protective Union Store; North Bridgewater Co-operative Store; Randolph Co-operative Store; Somerset Co-operative Foundery; Westfield Cigar Makers' Union.

A year or two later the co-operative shoe manufactories in North Adams and Lynn were formed; but as these are treated of in the reports of this Bureau for 1871 and 1875, somewhat at length, further reference to them is omitted.

In 1869 the labor movement took a political form, principally under the guidance of the leaders of the Crispin organization.

In the platform of the Labor Reform Party (1871) is contained this plank; first under "measures and demands":—

"We demand that every facility and all encouragement shall be given by law to co-operation in all branches of industry and trade, and that the same aid be given to co-operative efforts that has heretofore been given to railroads and other enterprises."

The same year the International Grand Lodge of Knights of Saint Crispin published a report on co-operation, in which they say:—

"We regard the trades' unions simply as an agent, a 'means to an end,' that should be to secure to the laborer a just reward for his toil, and in so far as they afford the means of resistance to encroaching capital, and in their acknowledged educational influence over their members, they are indispensable; but we can not help thinking that if they stop with simply preserving their numerical strength, they are in the long run apt to fail and become extinct. So then, your committee, while urging the use of every honorable means to preserve the integrity of the order, and extend its influence and usefulness, would just as earnestly urge our brothers to use their utmost endeavors to build up in the order a system of co-operation in both trade and manufacture; for in so doing they would not only improve their own condition, but lift the order into a position of the highest respectability and influence." They conclude as follows:—

"Our view is, that whenever the brothers can raise the capital they should organize at once, and also that lodges having surplus funds should invest them in starting co-operative manufacturing, or in aid of those already established.

Again, we would advise the formation of clubs, or co-operative stores, and set apart the profits, or a portion of them, in aid of co-operative manufactures, and in that way build up a fund. Perhaps in that way we may gradually work into self-employment better than any other. Then again, we would advise brothers to form small clubs for manufacturing. In France and Germany this plan has been tried successfully. Can it not be made so here? We believe it can."

As a result of this stimulus, some of the co-operative manufactories and stores, referred to above, were formed; facts in relation to which, other than contained in previous reports, have not come to hand. Most of these efforts failed.

Co-operative Building Company.

The report of the Bureau in 1870 called attention to the condition of the Boston tenement houses. The press continued the investigation, followed by the Board of Health. As a result of this agitation, some of the wealthier citizens organized a company for the purpose of providing better homes for the poor.

In May, 1871, they obtained an Act of incorporation under the title of the "Boston Co-operative Building Company." The Act is as follows:—

Be it enacted by the Senate and House of Representatives in General Court assembled, and by authority of the same, as follows:—

SECT. 1. William Gray, Abby W. May, Henry B. Rogers and Anna Cabot Lodge, their associates and successors, are hereby made a corporation by the name of the Boston Co-operative Building Company, in the city of Boston, to hold and improve real estate in said city, as homes for working people, at moderate cost; with all the liabilities, duties and restrictions set forth in all general laws which now are or may hereafter be in force relating to such corporations.

SECT. 2. Said corporation shall have power to hold real and personal estate, for the purposes aforesaid, not exceeding two hundred thousand dollars in value.

SECT. 3. The stock of said corporation shall be divided into shares, each of the par value of twenty-five dollars, and the dividends on said shares shall not exceed seven per cent per annum on the par value thereof.

SECT. 4. Said corporation shall make a return annually to the board of state charities, of the amount of capital assessed and paid in, of the amount invested in lands and buildings, and of all expenses incurred in the management thereof, and of all receipts from rents or other sources, and the dividends declared during the year.

SECT. 5. This act shall take effect upon its passage.

In April of the next year their capital stock was increased to $300,000, and they were authorized to hold and improve real estate outside the limits of Boston.

The published list of stockholders shows that the shares were held by 187 persons. They commenced operations by hiring, on a lease of five years, the building on Lincoln Street, known as the Crystal Palace, and the building of an estate on East Canton Street, at a cost of $142,000.

As these reports have never been given in any public document, we give the report of the treasurer for the year ending January 1, 1876:—

Capital stock paid in,			$217,500 00
Invested as follows:—			
East Canton Street estate,	$166,031 55		
Less amount on contract,	19,415 00		
		$146,616 55	
Webster Avenue estate,	$9,100 00		
Less amount on mortgage,	4,800 00		
		4,300 00	
Lincoln building,		2,861 98	
Country houses and lands in Dorchester,		40,704 10	
Land contracts for houses and lots sold,		17,122 59	
Atlantic Cotton Mills note (part*),		5,894 78	
			$217,500 00

Statement of Income for 1875.

1874. Dec. 31. Balance from last report,			$11,854 85
Less due from receipts of 1874:			
Dividend No. 4, of 3½ per cent,		$7,212 95	
Renewal fund,		2,500 00	
			9,712 95
Net balance *(amount carried forward)*,			$2,141 90

* The balance of the $9,000 of this note consists of income invested.

Amount brought forward,			$2,141 90
Rec'd rents E. Canton S't estate,	$19,150 20		
rents Webster Ave. estate,	1,036 00		
rents Dorchester estate,	100 00		
		$20,286 20	
Interest (balance of account),		206 88	
			20,493 08
			$22,634 98
Expended East Canton Street estate,		$4,669 06	
Webster Avenue estate,		395 95	
dividend No. 5, of 3½ per cent,		7,488 89	
general expenses,		194 71	
			12,748 61
1875. Dec. 31. Balance to credit of income,			$9,886 37
From which is to be paid dividend No. 6, of 3½ per cent,			7,592 37
Net balance,*			$2,294 00

Trial Balance, December 31, 1875.

Capital stock,			$217,500 00
East Canton Street estate,	$166,031 55		
Lincoln building,	2,861 98		
Webster Avenue estate,	9,100 00		
Treasurer of Lincoln building,	202 93		
Indebtedness account,			24,215 00
Notes receivable,	9,000 00		
Income,			9,886 37
Country houses,	40,704 10		
Renewal fund,			4,213 00
Boston City 6 per cent bonds,	2,010 00		
Old Colony Railroad 7 per cent bonds,	2,165 00		
Dividend No. 3,			3 50
No. 4,			5 25
No. 5,			858 87
Office account No. 3,	3 50		
No. 4,	5 25		
No. 5,	113 37		
Land contracts,	17,122 59		
Cash (general account, $6,616.22; dividend account, $745.50),	7,361 72		
	$256,681 99		$256,681 99

(E. & O. E.) CHARLES P. BOWDITCH, *Treasurer.*

BOSTON, December 31, 1875.

* This shows a nominal gain of $152.10, against which is to be set a loss on account of the Lincoln building of (for the year 1875) $669.11, and a proportion of the original cost of the improvements on the building not paid for by the earnings.

September 1, 1871, the company took possession of the Crystal Palace and remodelled it into a comparatively healthy tenement house.

The sub-committee of the company, in their report for 1874, speak of their efforts as follows: "During the past year we have continued the same influences upon the children as before, and we have added an industrial school, where boys are taught to mend furniture and carpenter work, cane-bottoming of chairs three evenings a week. We have nine scholars. All seem interested in the work, and we intend gradually to increase the number. They are selected from among the older boys. Some of them, from the evil influences pressing upon them, were liable to become drinkers of beer, night prowlers, and the future burglars and desperadoes of the community Over them, hitherto, we have apparently had but little visible influence. Now, they are induced to spend three evenings in the week in healthful mechanical work. The zeal of some of them is admirable, and that interest is stimulated, perhaps, by the fact stated to them that we hope to make the establishment a paying one, and if so, each pupil and teacher shall have his share of profit according to the number of hours he has been at work. A time-table is accurately kept each evening, so that even a tardiness will tell upon any possible profit. Of course, to make the school a perfect success, we need assistance in the way of funds and work. The committee issued a circular to all owners of our stock, 157 in number, and also to several of the school committee, enclosing a postal card, asking merely for 'old chairs to mend.' As yet, about one in twenty has replied. Perhaps it is well not to have *too many orders* at once; but we hope to be kept continually supplied with work. The school was opened September 15, 1873, for the boys; but only till the last week have the ladies of the committee been able to devise any plan for the girls. November 10, this obvious want was supplied by obtaining a competent teacher to instruct the older girls how to cut and make dresses. The girls enter into the plan with great interest. There are sixteen scholars in all; viz., nine boys and seven girls. We have two teachers in the boys' department,—one for carpenter and jig-saw and

turning work; one to teach cane-bottoming of chairs. There is one teacher for the girls."

"Our agent, Mr. Rose, is supervisor of the whole. The monthly salaries paid amount to $54. Besides this, necessary expenses for tools and articles needed for carrying on the business, have amounted to $196.74. These expenses have been met by prompt offers of some firm friends outside of the committee; and, doubtless, would continue to be so met in future, unless the stockholders think that the corporation should assume that duty, provided that all money expended for this purpose be drawn from any surplus remaining after paying the usual dividend to the stockholders.*

"The sewing school, which has been in operation for two years for the smaller girls, is still continued, and the pupils are improving in appearance and behavior, as well as in sewing. Children of Brookline have almost supported this work. After a time, we hope the children will learn to use a sewing machine, and have other occupations that may be deemed suitable and advantageous for them.

"Every two weeks the children have had their meeting for the five-cents savings bank deposits. Occasionally, on the same evening, we have had either reading of some tale or an exhibition of magic lantern, stereoscopic views, etc. The amount of deposits since January, 1871, up to November 1, 1873, has been $199.41. The interest accumulated from sums over $3 was, last year, $4.18. Each year, in the autumn, the amounts in bank of each depositor, with the interest that has accrued during the year, is read aloud to all, and in this report they seem to take the liveliest interest.

"At our first Christmas tree, this system of savings was commenced by giving to forty-nine children a bank book, each having a ten-cent deposit. The whole number of depositors from the first has been sixty-two. Twenty-nine

* The committee made no application to the stockholders for this purpose, the majority believing that the school should be sustained by voluntary subscriptions from friends. The committee, therefore, confidently appeal to the public, in aid of this excellent work. The expenses, at present, at least, far outbalance the receipts, and very probably always will do so, unless the instruction be carried on all day. The treasurer of the committee is Henry S. Grew, 89 Beacon Street.

may be said to be still depositing. The others have been careless about the matter, or, having moved away, have neglected it. Finally, the drunkenness of parents has prevented others from continuing their deposits.

"These twenty-nine have deposited $166.77 of the amount stated above, and have alone received all the above-named interest. The largest sum deposited was $32, by a young girl. The father fell ill, and is now dying of consumption, and this deposit has become, during his last illness, a real blessing to the whole family. Another, a boy, has deposited $29.53. Still another, $22.96. The number of depositors each evening varies from five to eight. We can not but hope that some thrifty habits are cultivated by this fortnightly meeting.

"During the year the children have had an excursion to Nantasket Beach, given them by invitation of the proprietor of the Boston and Nantasket Steamboat Company. Some of the older ones were invited to be present at the Warren Street Chapel festival at Music Hall.

"Flowers were distributed in the spring, and prizes were given in the autumn to children of several families for the best exhibition of plants.

"We had, at Christmas time, a Christmas tree, from which articles of usefulness were given.

"We have thus, as briefly and yet as comprehensively as we could, reviewed the work we have undertaken. We have seen the degradation of the whole building, and of its inmates, before we took charge. We have found a decided, though gradual, improvement. We look forward with great hope to the future. It may be said—we think with truth—that our attempt has met with a success that justifies us in asserting that *some one* should extend the same mode of operations until it includes all the vile tenement houses in the city. Here is truly a noble work to be done. It needs more laborers in it."

The East Canton Street estate consists of two blocks of 27 houses, three stories high, with the exception of five octagon front houses in the second block, which are four stories high. They contain 120 tenements and four shops.

The tenements are divided as follows: Six of one room, 36 of two, 45 of three, 34 of four rooms. The weekly rental is $417.60.

It is well to state, in this connection, that the trustees of the Lawrence estate have built three houses, five stories in height, opposite these blocks.

The secretary, Abby W. May, in her report dated January, 1876, says:—

"The past year, which has witnessed such great financial disturbances throughout our country, has brought a measure of loss to this company"; and that "among the first expenses to be curtailed is that of rent. If the working people can possibly put their families into smaller quarters, they do so; and they seek worse rooms than we furnish, if perchance the worse ones can be had at a lower price, which is not, by any means, always the case. So far as it has been possible or wise to be lenient in requiring payments, we have been so. But with all this, tenants have been obliged to leave us, and rooms have been vacant in all our houses. We have lost, in this way, hundreds of dollars, which in prosperous times would almost surely have been gained. Most of all have the hard times affected us injuriously in the sale of the houses built in Dorchester. Such houses are apparently needed, and the principle on which they are sold seems sound.

"Fifteen hundred dollars were lost from vacancies in the East Canton Street estate."

During the past year, the lease of the Crystal Palace, Lincoln Street, expired, and was not renewed. The report for the year ending December 20, 1876 (one year later than that given on page 92), shows that a 3 per cent dividend was paid in July. The January, 1877, dividend was passed, and $1,712 added to the Renewal Fund. The health record of the dispensary physicians places the Lincoln building at the head of a list of nine tenement houses in that neighborhood, some of which are occupied by a class of persons superior to the tenants in this building.

Why this commendable enterprise was termed co-operative, does not appear, unless the plan to provide cottages out of town was to partake of that feature. Other efforts in the

latter direction have been repeatedly attempted, and some few companies formed for the purpose.

The Patrons of Husbandry

In this State are not known to have any distinctive features, and no data is at hand of the extent of their trade. Their method is largely of the club-order system. In some cases they act with other associations.

Sovereigns of Industry.

The latest organized attempt that we have to chronicle is that of the Sovereigns of Industry, a secret society, with ritualistic work, the first council of which was organized in January, 1874, at Springfield. The preamble to the constitution of the national council is as follows:—

"The laboring classes include the most numerous part of the people in civilized society. On their toils and worth the social welfare of society ultimately rests. Their redemption from wrong and suffering is of a corresponding importance. But thus far in history, their energies have been so absorbed, and their faculties so limited by their material task-work, and by their deprivation of the best opportunities for spiritual and social culture, that they have been very largely the passive servants of the social order devised for and imposed on them by the smaller, but more thoroughly organized portion of society, called the ruling classes.

"It is an unquestionable truth that the ruling spirit in civilized society is the personal and class pursuit of selfish interests. Accordingly, under the influence of this spirit, the aristocratic classes have monopolized privileges to themselves and thereby fastened on the working classes burdens which are unjust and unnecessary, and ought to be abolished. Therefore, knowing that in society as well as in nature the organized forces and elements appropriate and control the incoherent ones, that power is not only wielded but also engendered by union and co-operative exertion, we institute the Order of the Sovereigns of Industry, for the purpose of overthrowing these evils, elevating the character, improving the condition, and, as far as possible, perfecting the happiness

of the laboring classes of every calling, and thus doing our part towards the redemption of the world. The order will aim to cultivate in its members generous sympathies, soundness of thought, comprehensiveness of policy, and a supreme respect for the rights of others, with an inflexible determination to maintain their own, while for labor it will seek to secure full and free opportunities.

"By all the wise and kindly measures it can command, it will present organized resistance to the organized encroachments of the monopolies and other evils of the existing industrial and commercial system. It will try to establish a better system of economical exchanges, and to promote, on a basis of equity and liberty, mutual fellowship and co-operative action among the producers and consumers of wealth throughout the earth.

"We wage no war with persons or classes, but only with wrongs, discords and hardships, which have existed too long. We most earnestly deprecate hatred, jealousy or envy between classes, and call on all people to be of one mind in the spirit of justice. We abhor every scheme of arbitrary agrarianism or violence, and shall use only such instrumentalities as are sanctioned by demonstrated principles of moral philosophy and social science, the universal interests of humanity, and a philanthropy rising impartially above all distinctions of class, sex, creed, race or nationality."

The following are the qualifications of membership:—

"SECT. 1. Any person engaged in industrial pursuits, not under sixteen years of age, of good character, and having no interest in conflict with the purposes of the order, shall be eligible to membership; and no distinction as regards rights and privileges of membership shall be made by this council, or by any state or subordinate council, on account of sex, creed, race or nationality."

The interpretation of this admits all but lawyers and politicians, though some councils refuse to admit traders.

The state council was organized in Worcester, April 21, 1874. Thirty-three councils were represented by 59 delegates, and a constitution adopted. At the second session there were 57 councils, with a membership of 3,564. At the

first annual meeting, held December 8, 1874, there were 100 councils represented, with an estimated membership of 10,000.

At the next session, held in July, 1875, 153 councils had been organized, and 12,077 members were reported. Forty-eight stores had been started,—19 distributive, 18 co-operative, 11 unknown. Thirty-two reported a capital of $30,228, doing an average monthly business of $26,250.

At the second annual session 166 councils were reported, with an extended membership of 20,000. Number of stores not given.

The order in this State now numbers 98 councils, with an estimated membership of about 10,000. The following table gives the statistics of the stores now in operation under the patronage of the order. From the first to the fourteenth, inclusive, they are conducted on the council system inaugurated at Springfield. The remainder are on the joint-stock plan, with several methods of conducting business and dividing profits. The cash system is not strictly adhered to as a rule.

Store Statistics—Sovereigns of Industry.

TOWNS.	No. of Months in Operation.	Amount of Capital Invested.	Par Value of Shares.	No. of Shareholders.	Average Sales per Month.
Springfield,*	29	$6,800 00	$100 00	68	$11,500 00
Worcester,	15	400 00	†	†	600 00
Canton,	11	595 00.	2 00	78	800 00
South Abington,	10	300 00	5 00	45	200 00
Spencer,	20	640 00	10 00	64	700 00
Attleborough,	13	1,000 00	–	–	2,000 00
Fall River,	10	90 00	–	–	290 00
Maynard,	4	108 00	3 00	36	300 00
Whitinsville,	9	300 00	5 00	16	50 00
Fairhaven,	11	100 00	–	–	100 00
Beverly,	16	600 00	–	–	1,800 00
East Dedham,	18	150 00	10 00	15	350 00
Fitchburg,	17	635 00	5 00	38	1,000 00
Kingston,	15	1,000 00	5 00	43	1,450 00
Groveland,	8	225 00	2 50	20	562 00
Woburn,	14	150 00	2 50	23	100 00

* Incorporated. † Treasury fund.

Store Statistics—Concluded.

TOWNS.	No. of Months in Operation.	Amount of Capital Invested.	Par Value of Shares.	No. of Shareholders.	Average Sales per Month.
Dorchester,	13	$600 00	$5 00	23	$600 00
Lawrence,*	19	5,150 00	2 50	292	5,000 00
East Boston,*	10	1,300 00	–	200	3,500 00
Charlestown,*	15	1,068 00	5 00	55	475 00
Orange,	–	2,000 00	5 00	174	1,364 00
Saxonville,*	7	1,450 00	5 00	–	4,400 00
Stoneham,	12	315 00	2 50	86	265 00
Kingston,*	16	4,500 00	5 00	92	2,400 00
Chelsea,*	15	1,300 00	5 00	200	1,800 00
Cliftondale,	14	400 00	5 00	17	500 00
Milford,	5	400 00	5 00	33	1,000 00
Haverhill,	15	500 00	2 50	34	3,000 00
Clinton,*	18	3,240 00	5 00	140	3,700 00
Total capital invested,					$35,316
Average sales per month,					49,806

In addition to the stores enumerated in the table, there are others in the following places of which we have no statistics: New Bedford, East Douglas, North Billerica, Newburyport, Cambridgeport, North Easton and Reading.

Fifteen of these stores sell at less than usual rates. Seven without any profit, and 15 at the usual rates. Nineteen of them deliver their goods to the customers, and 17 do not. Twenty sell only to Sovereigns, 17 to any one. Eighteen of them have a capital less than $1,000; 11 of them of, and exceeding, that amount.

The method of doing business of this organization is, in a measure, similar to that adopted by the Labor Reform Association of 1864. Members are furnished with trading cards, good for three months. Contracts are made by the executive committees of the national, state and the subordinate councils, covering nearly every article in the household economy, at discounts varying from 5 to 50 per cent, the lowest being upon groceries, the highest upon sewing machines. Subordinate councils are furnished with confidential circu-

* Incorporated.

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lars, giving name and discount of the parties with whom contracts have been made.

Tickets are good anywhere in the United States, at any house where contracts have been made. This system has been superseded, in many places, by an arrangement of club-order systems, and in some places the policy of the Fall River dividing stores, described in previous reports, has been adopted. In still other places joint-stock stores have been opened, at which members of the order are allowed equal discount with the shareholders. In others, a near approach to the Rochdale plan has been attempted.

But the most notable, and perhaps the most successful, is that adopted by the Springfield Council, and is as follows, as given under date of Springfield, September, 1874:—

"Each council shall receive subscriptions for stock from its individual members, and the moneys collected from the purchase of such stock, with the funds which the council will loan from its treasury, shall be placed in the hands of a receiver, to be selected by the council.

"The receiver shall pay over all moneys taken by him, into the hands of a board of trustees, taking their vouchers therefor.

"The board of trustees shall have the general management of the store, and, with the approval of the state executive committee, the appointment of an agent.

"The agent shall be placed under such bonds as the trustees may deem advisable.

"Hereafter, each council will be entitled to one delegate to a convention for choice of trustees, for every 200 shares which it shall hold of the stock.

"Nevertheless, every council holding shares will be entitled to one delegate.

"The price of shares shall be one dollar each, and any member is permitted to purchase a number not exceeding 100.

"Any member holding a share or shares, will be allowed interest, payable before dividends are declared.

"Any council wishing to withdraw its funds from the store, shall be allowed to do so, provided 60 days' notice shall first be given, and provided, also, that not over $200 may be

withdrawn at any one time, and at intervals of one month each thereafter.

"The board of trustees shall be chosen annually, on the first Tuesday in October, and a call for such meeting shall be issued by the acting board of trustees, by the 15th September, same year; the call stating at what place the meeting shall be held.

"The board of trustees shall hold meetings at least once in each month, at which the receivers of the several councils may attend.

"The receivers shall be advisory members of the board of trustees, and will at all times be permitted to examine all papers relating to the store, and all transactions of the trustees and agent.

"The necessary expenses connected with the meetings of the board of trustees shall be considered as part of the expenses of the store, and paid therefrom."

The goods are sold at just such a margin above cost as will pay expenses; no dividends are expected or desired. Interest on the money, at 7 per cent, is added to the items of cost.

In addition to the organization of grocery and provision stores, mutual relief associations have been established in some few places. Attempts have also been made in the direction of a building fund association, and also to establish a wholesale grocery house in Boston.

The building association laid out a grand plan for co-operative towns. The constitution provides for the purchase of land, laying out of building lots, the erection of buildings by co-operation, and provides for the establishment of a bank for the purpose of enabling the members of the association to borrow money without paying an enormous percentage. The bank is to pay 6 per cent interest on all moneys deposited, and cannot charge more than 7 per cent on money loaned to any member of the association. All money left after paying the running expenses of the bank, is to be apportioned according to deposits. The members are equally secured by the constitution. It provides that in case any member can not meet his obligations, either from lack of employment or other causes, except drunkenness, the society is to pay him back, if desired, all money invested except interest, the same

being left discretionary with the association. It has a clause that if a member dies and his widow desires to leave the association, she shall be paid back all moneys invested, with interest at 6 per cent. It also provides that no member can hold more than three lots or shares, and if he owns three he is compelled to build on one of them in one year's time from the date that he receives a warranty deed of the same. The shares are to be placed at $100 each, and can not be increased except by a two-thirds vote. It is estimated that each man will receive 8,000 feet of land, at a cost of about $100. The buildings can be put up by the quantity—six-room French cottage houses—at a cost of about $800 each; so for $900 or $1,000 a man has a house that can not be bought within ten miles of Boston for less than $2,000. The improvements will be made by the money obtained on premiums. There will, of course, be a number of lots that will be more valuable than others, which will be put up at a premium, and the man paying the highest premium will receive the title to the same. This enterprise must necessarily give work to a great number of men who are out of employment, and will benefit the workingmen in general. There need be no fear of want of railroad communication, for as soon as the population will warrant, a depot will undoubtedly be built.

The last method adopted for a concentration of trade is the formation of a "New England Sovereigns of Industry Board of Trade," whose objects and membership are as follows:—

"*Object.*—The object of the board shall be to promote direct co-operative trade or exchange among the councils and co-operative store associations organized under the auspices of the order of Sovereigns of Industry, or any other order which it may be deemed advisable by the board to admit to its privileges.

"*Membership.*—Membership of the board shall consist of not more than two representatives, chosen annually by the board of directors of each co-operative store company organized under the auspices of the order of Sovereigns of Industry; and of not more than two representatives of each local board of trade, consisting of not less than three councils; and of one representative from each council not represented in a board of trade, each of whom shall pay a membership fee of

$10; and of the president and secretary of each of the state councils, who shall be members *ex officio*."

Their method of concentration is as follows:—

The executive committees of subordinate councils, and the board of directors of Sovereigns' co-operative store associations, in each large town and city, are to organize and hold conventions for the purpose of organizing Sovereigns' co-operative boards of trade for their respective localities; each council or co-operative society represented in these boards to pay an entrance fee and such regular assessments as may be required to defray expenses. Reports are to be here made from the several associations as to the quantity and quality of goods of a given line which each association would want for any given time. These reports will be forwarded to the secretary of the state board of trade, and will represent the exact amount of goods in any line which would be required in each city or town.

The state boards of trade are to be composed of the executive committees, or representatives chosen from each of the local boards of trade, with headquarters in the chief commercial city of the State. The board of trade room to be fitted up for the reception of samples of goods which any importer, wholesale merchant or manufacturer might wish to offer for sale. The price per pound, parcel or other unit of measure at which the goods are to be sold for cash, to be marked on each sample, with the name of the firm or house sending the same. All samples of goods to be received by the secretary under rules made by the executive committee. The entire trade of the councils and local organizations of each State to be thus focalized and systematized, and placed in an accessible form before the wholesale dealers, would dispense, they say, with that questionable creature, a state purchasing agent.

The buyer for any Sovereigns' co-operative store may give his order to the secretary of the board, who will see the goods delivered; or, if the buyer prefer, he may go to the house himself and order his goods from the samples seen in the exchange. The necessary adjunct of the sample room, or exchange, will be the warehouse, in which goods for sale will be deposited at the owner's risk, to be paid for when sold, and

not before; and after the warehouse, or in conjunction with it, will come the Sovereigns' wholesale co-operative store, the capital therefor furnished by the several associations and councils connected with the order.

The national board of trade to be organized by representatives from the state boards, and the executive committees of the state councils, acting in conjunction with the executive committee of the national council. By means of the national board of trade, the trade of the several states will be concentrated in the same way as the trade of subordinate councils and of local co-operative associations is consolidated and united through the state board of trade. The expenses of the state and national boards of trade to be defrayed by a small percentage on the goods bought by each council and store association.

As this organization was established so late in the year, no statistics of its operations can be given.

In addition to the organization of trade, the national council have published a paper in their interests, and issued tracts and circulars on the subject of co-operation, from one of which, an "Address by Hon. Amasa Walker," we quote:—

"1. There must be, as I have intimated, a permanent capital; though it be, as we have supposed, a small one.

"2. As I have before insisted, no credit must be given. The association must neither take nor give credit; if it does, the result will be unsatisfactory. '*Cash down*,' must be the motto.

"The *credit system* has ruined many associations, because it makes co-operation difficult and dangerous. Credit is the workingman's *greatest curse*. I say this deliberately and without reserve. By this I mean that he suffers more from the practice of taking credit upon what he consumes, than from anything else outside his own personal habits. A man may purchase a house on credit, if he will, because it is fixed capital. He does not consume it. He has it permanently on hand, and by the use of it is able to lay up a greater amount of his annual earnings; but he should never take credit upon anything for daily consumption.

"3. A profit must be charged upon all sales, to meet nec-

essary expenses; and it should be large enough to guarantee against all accidents; since, if there is more than sufficient for that purpose, the balance that may have accumulated at the end of the year can be divided among the stockholders, or added to the working capital. A margin should always be provided.

"4. Again, economy should be consulted in the choice of a room for the business and in the help required to carry it on. This is one of the striking advantages of co-operation,—nothing need be expended to entice custom. So that the location is central, and the room sufficiently large and convenient, it matters not whether it has plate-glass windows, frescoed ceilings or rosewood counters. No matter how simple and inexpensive—the more so the better; for all saved in this way accrues to the profits of the associates.

"Associations often fail for want of economical management of their affairs. The great object being to save money, all unnecessary expense or waste must be carefully avoided.

"5. Pure, unadulterated articles alone should be furnished. This is an important object.

"6. And lastly, but not least in importance, the assistance of the fair sex."

Nothing has been done by the state organization in the direction of agitation. A paper published by individual enterprise has been in existence some two years.

The national council, in their declaration of purposes, say:—

"The order is an association of the industrial or laboring classes, without regard to race, sex, color, nationality or occupation; not formed for the purpose of waging any war of aggression upon any other class, or for fostering any antagonism of labor against capital, or of arraying the poor against the rich, but for mutual assistance in self-improvement and self-protection. It demands such equity as shall guarantee to every producer of wealth, whether he labors with brain or muscle, his proportionate share of that wealth. The wages of all classes of mechanics are in a great measure regulated by the demands of the middle-men who control the price of the wares manufactured. By exacting exorbitant commissions, these agents compel the manufacturers to cheapen the cost of production in order to secure a fair profit to them-

selves, and the burden necessarily falls upon labor. Our system aims to bring the producer and consumer in close business relations, thus enabling the manufacturers to fairly recompense their workmen. We do not war against manufacturers, but against the pernicious system of trade now in vogue, which not only injures them, but, in most instances, depreciates the wages of the workman.

"The order opposes the system of credit, by which the poor man is often led to purchase that which he would do without if he were called upon to pay as he goes, and is thus tempted to anticipate his earnings, and often to incur debts which he can not pay. Under this system the dealer is forced to increase his profits, that he may be able to bear the loss, thus virtually making the honest buyer pay for the goods which are consumed by those who are too poor, idle, extravagant or dishonest to pay their debts. It would unite its members in such fraternal bonds as shall hold them to a supreme respect for the rights of others, and sympathy for the distress of those more unfortunate than themselves, and also to co-operate with one another in the advancement of such objects as are best calculated to elevate the character, promote the interest and improve the intellectual, moral and physical condition of the human race."

In another circular they say that two prominent features in this movement are plans for education and culture, and for securing pecuniary advantages to its members. No methods for securing education or culture have as yet been adopted.

As in the New England Protective Union, the whole force of the order has been turned to matters of trade. In the records of the proceedings of the state council and circulars issued by the national council, hints are given of higher purposes and more important work, but no action has been taken.

In the report of the committee of the state council on abstract of proceedings, they say:—

"In accordance with the vote passed at the special session held at Worcester, September 2, 1874, your committee respectfully report the following abstract of proceedings and digest of laws, giving the full title to what it is hoped will prove a record of harmonious deliberation, and a digest of such wise legislation as shall ensure to the masses a unity of

purpose and of action, not only in the saving of a few cents from our wages, but in so increasing the purchasing power of a day's work, as shall make manual labor as pleasurable and profitable as that of the merchant and lawyer."

The executive committee, in their report, say: "From a condition of selfish isolation the masses are awakened to the importance of combination and unity of interests. Slowly, yet surely, we are learning the lesson of co-operation. The antagonism and jealousy that naturally come from narrowed opportunities, are giving way before the increased intelligence that comes from organization. If we are but true to each other, considerate in action and wise in judgment, our order will soon embrace in one solid phalanx a united and intelligent people, able to cope with and conquer the evils of their present condition, and become partakers of the bounty of which they are now but the producers.

"Brothers: upon you depends the success of the order. United we stand, divided we fall! Our duty is plain. By the victorious power of combination we can not only command the processes of the distribution of all commodities, but the distribution of wealth by natural and legitimate processes; so that the producer shall receive for his labor all that legitimately belongs to him, rather than as now, allow it to be used by the present wasteful system of wage labor by employers, traders and speculators."

In the concluding paragraph, as will be seen, they foreshadow co-operative production. In the report of the state secretary of the order, dated January 19, 1876, he says:—

"If one word can explain the source of all our disagreements, it may be called ignorance. Meeting together but seldom, with little opportunity for communication, our state council sessions have seemed but a babel of tongues, during which the building of our stronghold of resistance against impending danger has been stayed. Watchful against each other, instead of for each other, has seemed to be the method of our action.

"The past is behind, the future before us. What will you do with it? In warning and entreaty, let me urge you to put aside the spirit of envy and uncharitableness, and to take on the spirit of true co-operation, a spirit that shall lead to the

discussion of the causes of our poverty, that shall not satisfy itself with petty expedient, that shall mean a union of the wage and suffering classes in an unbroken phalanx,—before whose onward march, want, ignorance and crime shall disappear, and in their place, plenty shall flow, true culture, love and virtue rule."

As farther information upon the method, success and failures of some of these Sovereign stores, we give the following extracts from letters received:—

"There are three attempts at co-operation in Kingston, all giving promise of full success.

"*First.*—Silver Lake Co-operative Association, with store at Plympton Station.

"This commenced business July 1, 1875, with a capital of only $130, in shares of $5 each, held by Sovereigns of Industry. The number of shares per shareholder can not exceed 50. The buying and selling is strictly for cash. All sales at fair cash rates for the vicinity. The rate of interest on shares fixed. A sinking fund or surplus, which may accumulate to 30 per cent as large as the capital, provided for. Interest allowed on undrawn dividends; net profits divided among patrons in proportion to the amount of their purchases. Stock redeemable and dividends payable on demand.

"Amount of capital at the present time, $1,200, held by about 45 individuals. Sinking fund or surplus, about 20 per cent as large as the capital. Amount of business done per annum, about $15,000, and increasing.

"The trade from outside of the association exceeds largely that of the members.

"The interest now paid to shares is at the rate of 8 per cent per annum, and on undrawn credits at the rate of 6 per cent. The dividends to patrons is 4 per cent on the amount of their purchases.

"The expenses, all told, are about $76 per month.

"*Second.*—Old Colony Co-operative Association Store, Kingston Village. It has been in operation nearly two years, doing business now at the rate of about $30,000 per annum, on the Rochdale plan. Shares $5, and limited to 40 to an individual.

"It pays 8 per cent on its stock, and divides at present 2 per cent to patrons on the amount of their purchases. It is deemed a success.

"*Third.*—Kingston Co-operative Foundery Company, in Kingston, near North Plymouth.

"It was organized recently as a corporation, by workmen, who will hold most of its capital of $8,000. Its shares are $100, and the number to any individual limited to 10.

"It is proposed, as soon as possible, to increase the capital to $15,000. It will be ready for active operation on or before April next. It will have as members mostly picked men from other foundries, and it gives great promise of success.

"*Brookfield.*—The Sovereigns of Industry commenced a store in this town, May 1, 1875, and closed August 1, 1876. Commenced with about 30 members, and closed with about the same, and sold only to members, with profit only to cover expenses. Store open twice a week, in the evening. Each stockholder was limited to one share of $10. The cash system was adhered to. The cause of closing was, the treasurer could not attend to it, and no one else would. Besides, some were scared because the last quarter's sales were small, and they thought they were losing. But, in fact, the shares were at par, and paid 7 per cent besides. Most of them are sorry that it was allowed to close up."

A correspondent from Easthampton writes:—

"He joined with some 20 others and formed a club for the purpose of giving their united custom to the storekeeper who would give them the largest discount on goods. The best offer they received was 13 per cent, which they accepted. This continued for some six months, but the demands of other customers for the same advantage, and the yielding of the storekeeper in some cases, produced general dissatisfaction, and the arrangement was abandoned.

"They then formed a council of the Sovereigns of Industry, but found that, as they could only purchase certain kinds of goods at reduced rates, it was not worth while to continue, and finally resolved on a co-operative store on the dividend plan, as in England. This worked well until their prices

were made public, and the storekeepers were able to undersell in some articles, and so took their trade. Sales fell off almost half, without corresponding reduction in expenses. This resulted in a loss which was seriously felt by the really interested members.

"They decided to mark up goods to town prices and reduce expenses. The following quarter they were able to pay a dividend of 10 per cent on all purchases, and make up part of previous loss.

"This had the effect of bringing back some of the members that were falling off; and they hope by a continuance in the same direction to make their store a success.

"They find one difficulty of the cash system to be in the system of monthly payments for labor, and have been forced to give credit to the extent of half the value of share-money."

Saxonville.—A correspondent from this place writes:—

"We commenced business with about $1,100. We deal in groceries and meat, employ a head storeman, butcher, teamster and cashier. We have been able from the first to do a large business; have sold lower than others. We sell to any one, though outsiders have no inducement to trade, for they get no dividend. Still our trade is one-third from that source. In the first quarter the directors declared one and one-half per cent dividend on purchases; on the second quarter, three and one-half. The report for last quarter has not yet reached me. We are doing business to the amount of $4,000 per month, and if our members will only have as much patience with it as they have in dealing with others, there is not a shadow of a doubt but it will be a success in spite of all the disadvantages under which we have had to labor. The capital is now little over $1,700."

Miscellaneous Co-operative Enterprises.

In addition to the stores under the management of the Sovereigns of Industry, there are numerous others under different forms of management.

We give herewith a table of such as have been chartered, but have made no report to the secretary of state for 1875. It will be seen that many of these also are Sovereigns' asso-

ciations. We give them in this table, as no report of them was made to the secretary of the order.

NAME.	Localities.	Production or Distribution.	Year of Charter.	Amount of Capital.	No. of Shares.
Boston Co-op. Savings Co.,	Boston,	Dis.,	1875,	$1,000	200
Benj. Franklin Co-op. Council S. of I.,	Lawrence,	"	1875,	2,000	800
Clinton Co-op. Association,	Clinton,	"	1875,	3,000	600
Co-op. Ass'n S. of I., No. 76,	Lawrence,	"	1875,	5,000	2,000
Crispin Co-op. Company,	Lynn,	–	1871,	3,000	–
Farmers and Mechanics' Co-op. Association,	Athol,	Dis.,	1876,	1,000	20
Gosnold Workingmen's Co-op. Association,	New Bedford,	–	1871,	3,500	–
Hampden Co-op. Association,	Westfield,	Pro.,	1870,	4,000	–
Industrial Co-op. Association,	New Bedford,	Dis.,	1876,	2,500	250
Labor Journal Co-op. Pub. Co.,	Fall River,	Pro.,	1870,	5,000	1,000
Lechmere Distributive Ass'n,	East Cambridge,	Dis.,	1875,	1,000	200
Lowell Co-op. Home Co.,	Lowell,	Pro.,	1871,	20,000	–
Lowell Co-op. Ass'n S. of I.,	Lowell,	Dis.,	1876,	1,010	202
Lynn S. of I. Co-op. Ass'n,	Lynn,	"	1876,	1,000	200
Marlborough Co-op. B. & S. Co.,	Marlborough,	Pro.,	1876,	10,000	1,000
Natick Co-op. Store,	Natick,	Dis.,	1876,	1,000	100
North Brookfield Co-op. Ass'n,	N. Brookfield,	"	1875,	1,000	200
Orient Co-op. B. & S. Co.,	Marlborough,	Pro.,	1876,	2,000	20
Patrons and Sovereigns' Co-op. Association,	Westfield,	Dis.,	1876,	3,000	300
Southbridge Co-op. Association,	Southbridge,	"	1876,	1,000	200
Sagamore Co-op. B. & S. Ass'n,	Lynn,	Pro.,	1872,	2,000	–
Sovereigns' Co-op. Company,	Salem,	Dis.,	1876,	1,000	200
Sovereigns' Co-op. Association,	Webster,	"	1876,	1,500	300
Sovereigns' Co-op. Association,	Worcester,	"	1876,	1,000	200
Sovereigns' Co-op. Union,	East Boston,	"	1875,	1,000	1,000
Sovereigns' Co-op. Association,	Shelburne,	"	1876,	1,000	200
Sovereigns' Co-op. Store,	Taunton,	"	1876,	1,200	240
South Hingham Co-op. Ice Co.,	Hingham,	Pro.,	1872,	1,000	–
Truro Co-op. B. & S. Co.,	Truro,	"	1873,	2,100	–
Union Co-op. Gas Association,	Weymouth,	"	1872,	1,000	–
United Neighbors' Co-op. Ass'n,	Abington,	Dis.,	1876,	1,000	200
Westborough Co-op. Milk Co.,	Westborough,	Pro.,	1871,	1,000	–
Westfield Co-op. Store,	Westfield,	Dis.,	1871,	2,250	–

In contrast with this table, which is to some extent a table of failures, we give a table of those that have made returns for the year 1875. Many of these are productive experiments. How far they are co-operative, does not appear.

The most remarkable success is that of the Somerset Co-operative Foundery, an account of which is given further on.

Assets.

ASSOCIATIONS.	Localities.	Year of Charter.	Production or Distribution.	Capital paid in.	Real Estate.	Land and Water Power.	Buildings.	Machinery.	Other Assets.	Cash and Debts Receivable.	Manufactures, Materials and Stock in Process.	Miscellaneous.
Acushnet Co-operative,	Acushnet,	1867,	-	$6,900	$4,000	$1,000	$3,000	-	$6,929	$1,008	-	-
Boston Co-operative,	Boston,	1873,	Pro.,	4,000	-	-	-	-	-	7,413	$3,431	$1,229
Chelsea S. of I. Co-operative,	Chelsea,	1875,	Dis.,	814	-	-	-	-	397	-	634	-
Co-operative Mutual Homestead Co.,	Chelmsford,	1874,	Pro.,	4,000	9,000	3,000	6,000	-	4,000	2,400	-	1,600
Essex Co-operative B. & S. Co.,	Lynn,	1872,	"	4,000	-	-	-	$1,463	-	5,953	2,193	35
Eastern Co-operative,	Westfield,	1874,	"	4,500	-	-	-	-	-	5,280	2,015	262
East Abington Crispin Co-operative,	E. Abington,	1869,	-	-	-	-	-	-	-	-	-	-
East Templeton Co-op. Chair Co.,	E. Templeton,	1872,	Pro.,	15,000	-	-	-	9,720	-	8,010	11,078	3,434
Fall River Workingmen's Co-op.,	Fall River,	1867,	Dis.,	17,026	25,000	-	-	3,935	-	4,024	8,391	581
Fall River Co-operative Building,	Fall River,	1874,	Pro.,	6,000	6,887	737	6,150	-	-	-	-	-
First Worcester Co-op. Gro. & Prov.,	Worcester,	1867,	Dis.,	5,000	-	-	-	-	5,233	4,761	-	-
Fitchburg Co-operative,	Fitchburg,	1867,	"	1,380	-	-	-	-	-	-	-	-
Gardner S. of I. Co-operative,	Gardner,	1875,	"	1,800	-	-	-	-	2,230	1,341	-	129
Massachusetts Cigar Makers' Co-op.,	Westfield,	1873,	Pro.,	7,000	-	-	-	-	-	9,790	5,595	332
Middlesex Co-operative B. & S.,	Stoneham,	1875,	"	10,000	-	-	-	2,159	-	8,193	3,897	-
Mount Tom Co-operative,	Holyoke,	1875,	"	2,050	-	-	-	-	-	364	2,565	228
Monument S. of I. Co-operative,	Boston,	1876,	Dis.,	650	-	-	-	-	650	-	-	-
Natick Protective Union,	Natick,	1868,	"	6,000	-	-	-	-	7,919	1,800	6,111	-
National Cigar Makers' Co-operative,	Westfield,	1875,	Pro.,	2,100	-	-	-	-	-	2,501	2,420	237
Old Colony Co-operative,	Kingston,	1875,	Dis.,	1,320	932	-	932	-	-	216	2,778	50
Pioneer Co-op. Building Society,	Fall River,	1872,	Pro.,	5,890	5,455	955	4,500	-	-	132	-	-
Phœnix Cigar Co-operative,	Westfield,	1875,	"	3,500	-	-	-	-	8,772	4,772	4,000	-
Stoneham Co-op. Shoe Company,	Stoneham,	1873,	"	10,000	-	-	-	1,762	-	9,130	5,228	534
South Abington Workingmen's Co-operative Grocery and Provision,	S. Abington,	1870,	Dis.,	2,025	-	-	-	-	-	7,775	2,667	-
Somerset Co-op. Foundery Company,	Somerset,	1868,	Pro.,	30,000	11,400	-	-	-	-	3,342	16,140	17,542
Stoneham Co-operative Union,	Stoneham,	1873,	"	3,310	-	-	1,700	-	-	83	3,760	965
Sovereigns Co-operative Company,	Springfield,	1875,	Dis.,	6,000	-	-	-	-	10,510	-	1,753	2,000
Wenham Co-operative Union,	Wenham,	1870,	"	5,000	5,978	905	5,028	-	-	6,463	-	2,575
Westfield Cigar Makers' Co-operative,	Westfield,	1871,	Pro.,	1,350	-	-	-	-	-	2,529	1,418	228
Westborough Co-operative Union,	Westborough,	1872,	Dis.,	8,850	4,600	1,600	3,000	-	-	3,447	4,631	-

Liabilities.

ASSOCIATIONS.	Localities.	Capital Stock.	Debts.	Reserves.	Balance, Profit or Loss.	Reserve for Depreciation.	No. of Shares.
Acushnet Co-operative,	Acushnet,	$7,000	-	$5,037	-	-	276
Boston Co-operative,	Boston,	4,000	$6,316	-	$1,739	-	12
Chelsea Sovereigns of Industry Co-operative,	Chelsea,	1,000	55	5	161	$16	173
Co-operative Mutual Homestead Company,	Chelmsford,	4,000	5,000	-	-	4,000	40
Essex Co-operative Boot and Shoe Company,	Lynn,	4,000	5,881	-	-	-	8
Eastern Co-operative,	Westfield,	4,500	6,908	-	-	-	10
East Abington Crispin Co-operative,	East Abington,	2,500	-	-	-	-	-
East Templeton Co-operative Chair Company,	East Templeton,	15,000	17,242	-	-	-	150
Fall River Workingmen's Co-operative,	Fall River,	25,000	13,129	-	1,145	10,630	1,690
Fall River Co-operative Building,	Fall River,	6,000	-	-	411	-	-
First Worcester Co-operative Grocery and Provision,	Worcester,	5,000	4,354	-	-	-	1,000
Fitchburg Co-operative,	Fitchburg,	1,380	588	-	-	-	260
Gardner Sovereigns of Industry Co-operative,	Gardner,	1,800	1,799	-	101	-	-
Massachusetts Cigar Makers' Co-operative,	Westfield,	7,000	7,148	-	-	1,803	10
Middlesex Co-operative Boot and Shoe,	Stoneham,	10,000	4,244	-	8	-	40
Mount Tom Co-operative,	Holyoke,	4,000	1,107	-	-	-	82
Monument Sovereigns of Industry Co-operative,	Boston,	1,000	-	-	-	-	130
Natick Protective Union,	Natick,	6,000	-	1,800	-	119	600
National Cigar Makers' Co-operative,	Westfield,	2,100	2,772	-	286	-	7
Old Colony Co-operative,	Kingston,	2,000	2,187	-	422	47	264
Pioneer Co-operative Building Society,	Fall River,	6,000	-	-	427	-	589
Phœnix Cigar Co-operative,	Westfield,	3,500	4,113	-	1,159	-	7
Stoneham Co-operative Shoe Company,	Stoneham,	10,000	5,896	-	253	534	40
South Abington Workingmen's Co-operative Grocery and Provision,	South Abington,	2,025	7,521	173	723	-	405
Somerset Co-operative Foundery Company,	Somerset,	30,000	10,600	28,824	6,000	-	300
Stoneham Co-operative Union,	Stoneham,	4,000	2,873	-	211	64	331
Sovereigns Co-operative Company,	Springfield,	7,000	8,224	-	39	-	60
Wenham Co-operative Union,	Wenham,	5,000	9,418	-	538	-	500
Westfield Cigar Makers' Co-operative,	Westfield,	1,350	7,222	-	4,397	-	9
Westborough Co-operative Union,	Westborough,	8,850	3,000	-	228	500	236

The following is a list of titles of companies to whom charters have been granted; some have never made reports to the secretary of state, and others probably have never organized for active work. We have no recent reports, and know nothing of their present status:—

Cigar Manufacturers' Co-operative Association, Westfield,	1871
Co-operative Mill, Fall River,	1867
Gardner Co-operative Association, Gardner,	1868
Holyoke Co-operative Association, Holyoke,	1870
Hopkinton Co-operative Association, Hopkinton,	1870
Howard Co-operative Company, Lynn,	1871
Irish-American Leader Printing and Publishing Co., Boston,	1872
North Adams Co-operative Shoe Company, North Adams,	1870
Sandwich Workingmen's Co-operative Association, Sandwich,	1867
Shoemakers' Co-operative Company, Lynn,	1871
South Reading Co-operative Association, Wakefield,	1867
Springfield and Newburyport Mining Co-op. Asso'n, Newburyport,	1875
Union Cigar Makers' Co-operative Association, Westfield,	1869
Union Grocery Co-operative Association, Weymouth,	1872

One of the most successful co-operative distributive associations in the State is that of the Natick Union Store. Others may have done a larger amount of business, but none have seemed to be so purely co-operative.

This store was chartered December 10, 1866, as "The Natick Protective Union." The capital stock was $2,000, divided into 200 shares of $10 each. The system, in brief, is as follows: Sales and purchases to be always for cash; goods to be sold at the lowest prices consistent with safety; stockholders to have a discount of 5 per cent from the price set; a good quality of goods to be kept.

The company, not being permitted to own any real estate, rented a suitable place, which it still occupies, and opened the store December 28, 18 days after being organized.

The semi-annual dividend has always been ready promptly. In October, 1868, more than $2,000 had been accumulated; and as the store needed $4,000 capital to do the business with, it was decided to make a dividend to every shareholder of a new share instead of $10 cash.

In January, 1872, $4,000 were divided, giving a cash dividend of $10 a share. At the annual meeting of 1874, $2,000 more were divided, giving $5 to every share, and still leaving an undivided surplus.

January 1, 1875, there was paid a dividend of $10. At this time the capital stock was increased 200 shares, making the entire capital $6,000.

January 1, 1876, there was paid a dividend of $4. Total amount of dividends paid to each share, $39. Six per cent per annum has been paid on the capital, as required by law, and also the amount of sinking fund has been set aside, as required by law. Total sales for 1876, $120,000.

Groceries, meat, vegetables and fruit are the kinds of goods bought and sold. The first cent's worth of credit has not yet been given. Quarterly meetings are held in January, April, July and October, at each of which a full statement of the condition of the association is given. At the January meeting officers are chosen. They consist of president, secretary, treasurer and three directors. The president, treasurer and directors constitute what is called a board of managers.

As the most successful case of co-operative production, we give (from a correspondent) the following brief account of—

The Somerset Co-operative Foundery Company.—"This company was organized October 18, 1867. We lost money up to the 1st of January, 1869. Since then we have paid dividends to stockholders, $14,600, and added to our surplus fund, $30,800. Our stockholders number 53, of whom 29 work for the company. We pay no dividends to our customers.

"Wages paid are better by 25 per cent than in any other shop in New England, and 50 per cent better than the average. We did not take any stockholder at first, unless he took five shares. We have had a good class of men, and the amount they put in has held them together. But if we had not made money, I do not think it would have been possible to have kept them together. We have had very little trouble, and only a few of the original stockholders have sold out.

"The assets and liabilities are as follows:—

Assets.

Manufactured stock,	$10,523 00	
Unmanufactured stock,	5,617 00	
Tools and fixtures,	4,242 00	
Flasks and patterns,	12,300 00	
Cash and notes,	2,533 00	
Outstanding bills,	29,368 00	
Real estate,	11,400 00	
		$75,983 00

Liabilities.

Capital stock,	$30,000 00	
Surplus fund,	27,824 00	
Notes at bank,	5,000 00	
Other liabilities,	5,600 00	
		$68,424 00

"January 1, 1876, we added to surplus fund, $3,000, and paid dividend of $3,000 cash."

A few more examples of successes and failures are here given.

Fitchburg.—A correspondent says:—

"There were two union stores in Fitchburg previous to any attempt at co-operation, in which I was personally interested, and as far as I can learn, the cause of their death is the same in common with the death of another; viz., lack of knowledge of the business, lack of interest in the business, and a failure to do the duties of managers by the managers. As far as I can learn, both efforts went out of existence with the taint of dishonesty resting on some of the managers.

"The next attempt at co-operation was the organization of the Fitchburg Co-operative Grocery Store, November 14, 1864, with a capital of about $600, which was increased to $1,400. At one time dividends were paid on the amount of trade by each member, interest of 6 per cent being paid on the stock. Shares were first fixed at $10, and afterwards reduced to $5, no member having the right to hold over $50 in stock. Annual dividends on trade were paid, ranging at different times from 2 to 7 per cent. The amount of trade per month ranged from $1,000 to $3,100. The greatest number of shareholders at one time was 120. The cash system was adhered to the first

few years, after which the head clerk was allowed to give credit at his own risk. Goods were bought on credit.

"The last of March, 1873, the concern failed with liabilities of over $6,000, and assets of about $2,400; the cause of the failure being the same as in previous efforts of the same nature."

The Andover Co-operative Association organized as a protective union, and ran about sixteen years. Generally successful. It was started, mostly, by the hacklers, in Smith and Dove's flax mill. They were mainly Scotch, English and Irish in nationality. Semi-annual dividends averaged about 9 per cent. Shares were $10. No one was considered a member unless he owned seven shares. The old system was, of retaining all the profits until full membership, and a written notice of one month to draw money required.

A member under the new organization can own ten shares. None but workingmen own shares or patronize the store. It is open three nights in a week. Sell at about the same price as the best store in town. Take account of stock once in six months. Customers take home their own goods. There are about 40 members. Capital stock, $2,300. They buy on 30 days and sell on 30 days. Have lost but little. A new customer has to be approved by the committee of management; a new committee is generally elected every year. They have three salesmen; pay them 22 cents an hour when on duty. Committee meet twice a month, and there is a general meeting twice a year. They meet in the school house.

A portion of the profits are reserved for a sinking fund. The store is open from six to eight o'clock, P. M., Tuesdays, Thursdays and Saturdays.

There is a good deal of change in the trade: No limit to the number of shares.

There have been five attempts at co-operative storekeeping in Haverhill. First, the "New England Protective Union"; second, the "Union"; third, the "Music Hall Union"; fourth, the "Crispins"; fifth, "Sovereigns of Industry."

The second started November, 1862, with 65 shares and 30 shareholders; par value of shares, $5. Most of the capital taken to furnish the store. The president loaned $800,

taking a grab mortgage. For three years an average dividend of 14 per cent was paid, and an average trade of $60,000 a year. Storekeeper's salary was $1,000. He was the president of the association. There was no limit to the number of shares. Credit was given to any one recommended by the directors or persons employed in the store. The store was closed up in February, 1866. There were $700 due the store, principally from stockholders. Great deal of feeling grew out of closing up, the president claiming to have lost considerable money, and the stockholders making the same claim. The last year of the store was a losing one; the expenses were not reduced; the stock had increased to $4,400. No account of stock was taken. A new agent had been appointed the first of the last year, and the wholesale grocers refused to give credit. This embarrassed the store, and caused depreciation of stock.

The "Crispin" store started in 1872, and continued four months. Capital stock, $2,820—$1,400 paid up. Balance never paid. Par value of shares, $5. Directors were elected by stockholders, the latter choosing the agent. No invoice was kept. The association paid creditors in full. They were all shoemakers, and mostly Americans. Bought for cash.

The store of the "Music Hall Union" was held by men of means. This store succeeded in reducing prices, and closed up, paying all bills. It was not a financial success.

"The 'South Abington Workingmen's Grocery and Provision Association' was organized February 14, 1870, with a capital stock of $1,060. The number of shares at that time was 212, held by 68 members. Goods have been sold from its commencement to the date of January 15, 1876, on credit. The profits were divided not on the shares, but on the amount of goods purchased, which was about $2.50 to $1,000 worth purchased. Eight per cent interest has been paid on the capital stock. This has been increased from time to time, until the amount is now $2,025. No limit has ever been made to the number of shares held by any member, save the statute limitation to $1,000 for one shareholder. The number of shares in our store is now 405, held, I believe, by 96 members. One person holds 40, another 20, and nearly all the rest two shares each.

"The store did very well the first four years of its existence, but the management during the year 1874–75 trusted out goods without good judgment being exercised, and the store found itself at the close of 1875 with about $8,000 in bad bills. At that time we were in debt to Boston parties to the amount of $10,000. So we were about $3,000 behind what we should have been.

"Previous to these two years, we had paid a dividend every year to shareholders on their amount of purchases, as stated above. The last two years we have paid no dividends. At the commencement of 1876 the creditors began to press us for payment, and there was a compromise effected by which a settlement was made, the association paying 35 cents on the dollar.

"So it may be said that we have failed, in a measure, in our attempt at co-operation, partly through mismanagement and partly through the credit system; my judgment is, as much through the latter as the former.

"Our form of management has been by a board of directors of five, with the addition of the president, secretary and treasurer. Our treasurer has always been our chief store-keeper, buying and selling all goods, with such help as he needed to assist him. The store adopted the cash system, January 15, 1875, and has adhered to it ever since, but has hardly paid its way.

"The condition of the store at the time of its settlement with the creditors was such as to awaken a great deal of discord and distrust, which has grown rather than diminished, and where there is a want of harmony, it is very difficult to make co-operation a benefit or a success in any degree. We have many men among our shareholders who are ignorant, knowing nothing of business management, and a few who seem to have souls no larger than an old-fashioned three-cent piece. It takes almost a lifetime to beat a noble idea into such men's heads. Ignorant and selfish men are not the men to manage co-operation and make it a success.

"Our store is now in operation, but I do not think it will be very long after the annual meeting, which takes place on Wednesday evening, January 10.

"There seems to be a pretty strong feeling that it should

close up, rather than run behind any more. This is the feeling among many of the shareholders, and when they refuse to give it their hearty support, and make the sacrifices which will always be necessary to the success of the principles of co-operation, especially in its infancy, *it must fail.*"

Conclusions.

It appears, from a careful review of the past, of which this article is but a brief outline, that there has been for the past twenty-five years in this State an annual investment of from one hundred thousand to a quarter of a million of dollars in co-operative experiments; that the average duration of their existence, omitting such as have had but a normal life, has been from about three to five years.

It has been shown that they have their origin in the most benevolent and statesmanlike motives,—the good of the human race. The founders in most instances are what Holyoake calls "world makers,"—men who believe in the golden rule and the golden future.

To these Utopians, the little grocery store is arrayed in the magnificence of their own imaginations, to assist in the management of which is to govern the empire in its infancy.

The men who distributed the box of soap and half-chest of tea, in 1845, felt that they were bringing the tea-grower and the soapmaker into closer relations, thus stimulating America and civilizing China.

They, like their co-workers in Rochdale, sought the solution of the labor problem.

The American pioneers of the protective union were the men who were agitating for ten hours, the institution of lyceums or institutes, for making the militia system less burdensome to the laboring classes, for legislative regulation of factories, education for all, abolition of imprisonment for debt, the adoption of a national bankrupt law, the extension of the right of suffrage, the enactment of a mechanics' lien law, the abolition of capital punishment, slavery and war.

They organized and worked. They called conventions, wrote appeals, published tracts, weighed out justice and sugar with even balances, and measured men, government, and cotton cloth by the golden rule.

Their weekly meeting was the oasis in the desert of their lives; for there, in their upper room, they discussed the affairs of State and the affairs of their union, the tariff and the price of tea (many of them were free-traders), cotton cloth, slavery and the excessive hours of labor.

With the increasing cares of the organization and of their families, the lesser overcame the larger. Tea was discussed more and tariff less. Men joined the store who never attended the meeting, or cared for aught but low prices and large dividends. Then other stores were started whose meetings were wholly for business purposes, the electing of a storekeeper, and the needed committees. The selfish became the majority. The Utopians were retired from the command, and the store that seemed a portion of the coming kingdom became the arena for a competition that never scrupled at a trade that would bring dividends.

For a time the New England Protective Union was a financial success, though the trade of the members was never wholly, or in great part, concentrated. Its failure to carry out its grand mission, as set forth in the preamble to the constitution, was the secret of its utter failure. Failing to extend its operations, it limited them.

At its origin, it held the principle of each to help the other, and ended with that of each to help himself. It is not surprising that, in many cases, the storekeeper having more time and opportunity than the rest, often profited by their example, and, at last, helped himself to the sole control.

This experiment demonstrated that a number of men could unite and buy goods at wholesale, and distribute them at less cost among each other, than under the old system; and it further demonstrated that they could not co-operate to make that fact of any use to themselves nor to posterity. More was done by the score of men who started the organization, and their few dollars, than was done when the members were numbered by thousands, and the dollars by hundreds of thousands. The annual conventions were as well, or better, attended when the division numbered less than two hundred than when they numbered upwards of six hundred.

The separation of the organization into two branches, in 1853, was, in brief, a failure to co-operate. As long as the

members were personally agreeable to each other, and there was no conflict of authority, they co-operated. They failed just where their system was strongest and they were the weakest.

That the war finally destroyed the last vestige of the stores, was but natural. The uncertainty of prices at that period frightened the stockholders, and they gladly sold to the storekeeper, who was willing to risk something for the sake of continued occupation. For years before its demise, it was nothing more than a joint-stock enterprise, in which the stockholders cared little for the—

"Dividends of comfort bringing"

to any but their own household.

As with this experiment, so with the others. In their inception they were managed by men energetic and disinterested, willing to work, but not always ready for the martyrdom that such efforts demand. When risk or loss was the rule, and dividends an unknown factor, co-operation was easy. But with success came the selfish, who, as Holyoake says, risk nothing in the early struggle, "But as soon as the sunshine of success warms up the scheme, the envies and jealousies crawl out like parasites, and in some places where human nature is worse than in others, they overrun everything, and make the society morally uninhabitable."

There is such a similarity in the oft-repeated story of their failures, that one or two examples will do for all. The name of the places are omitted from the recital to avoid seeming personality.

A store was started in ——, with a capital of $2,000, in $5 shares; no shareholder permitted to hold more than ten shares, or have more than one vote. Preliminary to the opening, meetings were held for the adoption of the plan. Weeks were spent in the discussion. No one took any trouble to investigate past efforts, but each evolved out of his own consciousness the only safe and reliable method. At last a compromise was made, and a mongrel plan adopted that contained nearly all the faults of the others, and but few of the virtues.

Then came the momentous question of constitution and by-laws. Committee after committee labored, Sundays and week-day nights, when more discussion followed, resulting in more law than they really wanted, and fewer members than they started with, both of which facts worked together for good; for there was so much law no one ever expected to know it all, and the disaffected members were of the weak-kneed kind, and would have proved a heavy load to carry. Up to this time they had practically proved they could co-operate. So far, they were in earnest. They meant to have a store, the opening of whose doors would be the open sesame to untold wealth to themselves, and inconceivable good to humanity.

Next came the choice of officers. The men who had been positive, deliberative and unfaltering were ignored. Men were chosen who had kept quiet, or who had always kept with the majority,—men who had wormed themselves into the confidence of their fellows. Thus loaded, the store started. Six months found them with depreciated stock—failure before them. They had bought for cash and sold for cash. No one had stolen any money, but their $2,000 was worth but $1,000. Again the true leaders came to the front, and pointed out the inefficiency of the management. For once they were heeded. They took the reins of government and succeeded. Dividends were declared; the stock increased; the method and the law was simplified; confidence was restored. For a few years all went well. Then began the whisperings of discontent. The management was arbitrary. It cost too much to run the store. The storekeeper's salary was too large. It was more than a mechanic's wages. The store could run itself. This man and that should be taught that others could do as well as they. By much whispering and manipulation, many falsehoods and misrepresentations, the management was changed, innovations were introduced, a new storekeeper employed. The cautious were frightened and withdrew their money; an unwarrantable dividend was declared to reinstate confidence; trade fell off; and they failed.

Says a correspondent: "We have encountered a disadvantage which has almost invariably beset undertakings of this

character. The want of capital has been one; but a lack of confidence in ourselves, and the inability to find an agent who would manage the business of the association as well as a prudent person would manage for himself, has prevented the realization of the best results."

Says another, writing from Fitchburg: "Co-operative stores are started by men who believe in them, and they are run successfully for a while, until the managers get sick of doing a great deal of work for nothing, and taking their pay in *curses* from the other members; and, step by step, they begin to go down until a disastrous failure overtakes them. One great difficulty with the co-operative store here was that its own members would not support it. Other dealers, knowing that they belonged to the co-operative store, would underbid on some articles, and by so doing would get the trade of many of our members, when in the main they were paying more for their goods than they would have had to pay at their own store."

A correspondent in a small village of but fifty houses, describes difficulties that are beyond the control of the workingmen. We give his experience in his own language. He says: "In this town there are three manufacturing companies. All the real estate in the vicinity is owned by these corporations, with the exception of four houses, on small lots, with a reserve in the deeds 'that the land shall be used only for the purpose of a dwelling-house.' One of the corporations carry on a general grocery and provision store. Two of the partners in this concern are also partners in one of the other companies, but in one they pay cash monthly for their labor; in the others they pay cash when they see fit, and truck for the remainder.

"A council of the Sovereigns of Industry was started in 1875, with 17 members, which was increased to about 50. They traded under the club-order system till July, 1876, and then started a store; whether on the right or wrong basis, it was their only chance. It was hard work to get enough together for a meeting. Some talked store, and wanted to start on a small capital; others thought it would be crushed out; some were afraid of being turned out of work.

"The first difficulty was to get control of a room to start in. One of the members had a little shoe-shop that stood on a piece of land that was not reserved in the deeding. He offered to start a store on the following plan, as an experiment, for six months: First, to raise $300 capital, the 'Council' to pay 7 per cent interest, one dollar per day to be paid for wages, one dollar for month's rent, the goods to be sold at the going prices in the vicinity, the profits to be divided among the purchasers according to the amount purchased, two-thirds to 'Sovereign' buyers, one-third to others. We did not have trade enough to pay the expenses for the following reasons: After he started the store, he was subjected to petty annoyances in the foundery, from the treasurer and the foreman, and at last they discharged him. It has not been decided what to do with the store yet; but, as a co-operative store, I think it is a failure.

"The corporations here own the labor, the homes, the school (for the school is partly run on the peon system). There is a fund called the —— fund, and this treasurer is trustee. We can't have a teacher without he consents; but we do have fair teachers, so we must, I suppose, thank our lord cardinal for that.

"To sum up the causes of failure, they are these: Want of unity among the members; too much unity among the controlling powers; not population enough in this vicinity to make co-operation successful; violation of trade contracts by some of the traders that we made terms with, and hard times.

"I do not pronounce this a complete failure yet, though it has that look now. I am in hopes, if we can live till spring, that there will be a reaction take place."

The failure of these experiments is not so much due to methods as to men. The men are masters of the method. When it is said that a store failed because it allowed credit, it only half states the fact. Who allowed credit? Not the storekeeper. He was the servant, subject to the majority. It was a failure to co-operate; for co-operation needs an intelligence equal to the settlement of such a question.

If the management is charged with dishonesty or inefficiency, the co-operators are also responsible. The judgment necessary to select the proper men is the first essential of co-oper-

ative success. Men are often selected to important positions because they are affable, agreeable persons, qualities to be encouraged, but of little avail if methods of business are unsound.

The mistake most frequently made, is, that the failure of co-operative stores is almost wholly due to financial causes; while there is absolutely no chance of failure for such reasons. That stores calling themselves co-operative may so fail, is true; but a *purely* co-operative store, never.

A purely co-operative store starts with a paid-up cash capital sufficient to purchase and distribute the goods agreed upon to a known number of customers already procured, without cost. They buy the best, because it is cheapest. They buy for cash only what is wanted, never anticipating demand. They sell for cash at a profit that will cover all the elements of cost and risk, including a per cent for capital, sinking fund, increase of business, propagandism, education and a small dividend to purchasers.

There is no system so simple, none with so little risk of failure, and yet there has been one continued story of failure from its inauguration, in 1845, to the present time. How to attempt to account for this seeming contradiction, was the purpose of this investigation.

In stating the causes of failure, we are met with the history of co-operation in England, or, rather, with so much of it as relates to success. The failures are never referred to in this connection.

The limit of this article could not enumerate them. That co-operative distribution in England, since 1843, has reached a wonderful success, is true, but that success is due to certain causes that do not obtain here among the working people.

Co-operation succeeds best where there is the most equality of condition, unity of action, and regard to discipline.

Lancashire is, above all parts of England, where artisans are employed, the most homogeneous, the most united, and the best disciplined. Schooled in the trades' unions, which are necessarily as strict in their discipline as an army, never overcrowded by hordes of foreign emigrants, energetic, speaking a dialect of their own, intermarrying for generations, employed to a large extent in one occupation, they were, and

are, of all men, the best-conditioned for successful co-operative experiments. This statement is further illustrated by the fact that Scotland, where the same causes operate, is second only to Lancashire, while Ireland and the South of England have barely moved in this direction.

Not only have these causes contributed to these grand results, but the very embarrassments under which the working class labor have conspired to their good.

"Here in Massachusetts," says a contributor to a former Bureau Report, "it is much easier to rise, and nearly all who succeed desert their class, leaving behind poorer leadership than in England, where it is forced to stay in the ranks; and, as the masses there are more used to the control of managers than the corresponding class here, all workingmen's organizations there are, of course, more successful. There are also some very eminent outsiders who aid the English co-operators in their humble efforts; while here the corresponding class are engaged in politics or literature."

Even under these favorable circumstances, the pioneers and their successors found that the art of agreeing to disagree, and especially to agree with disagreeable persons, was hard to acquire. In this State and country there are no such conditions. Co-operation here must succeed through a superior intelligence, and the difficulty that is first met with is that utter defiance of discipline that is the boast and the shame of Young America.

Neither the Church nor the State nor the trades' union can enforce unpopular law. Even the militia have a chronic condition of insubordination.

Co-operation means discipline. The language applied by Thorold Rogers to co-operative production is applicable to co-operation in any form, only in less degree. He says: "The second condition of successful co-operation is strict management, due subordination, and unhesitating obedience to orders. The discipline of a manufactory is as essential as the discipline of an army, and can not be relaxed except with the gravest risk. It is plain that management and control should be intrusted to proper and accredited authority. It is equally clear that lawful orders must be obeyed, and that authority ceases to be respected when it can not command

obedience. It is also certain that success in any joint or co-operative undertaking is conditioned by the harmonious working of all the contributory parts. When a machine is out of gear, its use is impaired, its employment is attended with waste and danger. Similarly, the mechanism of an undertaking cannot be dislocated without peril of ruin or at least of loss."

Without discipline, organization or leaders; with dissimilarity of tastes, opponents in politics and religion, heterogeneous, floating, in many cases with a conceit or self-importance that is the product of that "little learning" that is "a dangerous thing," how can we co-operate? Men who would gladly help are held back in dismay, by the oft-recurring spectacle of seeing the best men driven out of their advocacy. They see the suspicion and mistrust, the imputations and almost martyrdom of their friends.

What has been written of England can be repeated with emphasis here.

"Any one acquainted with the leaders of the chief working-class movements in this country for twenty years past, will bear me out in the assertion that the best men, whose capacity was greatest and whose pride and self-respect were strongest, have been driven out of the ranks by the social errors I have described. Had it not been so, the working classes would not now be, as they yet are, the pariahs of the state, whom *everybody compliments, but no statesman trusts*, and successive cabinets, by the common consent of the House of Commons, ignore.

"There are co-operative societies in this country older than the princely one in Rochdale, and which, situated in more important towns, have large opportunities of growth, *but membership in them has been a species of moral martyrdom.* The voice of dissension has never been silent, and internecine recrimination has impregnated the air, like typhus, and petty jealousies have squealed and squeaked through their rooms and over their counters until success has been scared away."

Many a store has been broken up with distrust, and honest, faithful servants driven in despair into the more merciful service of shopkeepers. "In some places a storekeeper durst not look well fed; if he grew fat, he would be condemned at

once. The pay that is given is always computed upon the level of their own wages, and the abuse they receive is usually more than that of the average employer."

If such are the difficulties that beset ordinary co-operative storekeeping, what are the hopes of the immediate introduction of co-operative production?

Co-operative production deals with the distribution of wealth in the process of production, and comes more nearly to the interpretation of the word as given at the head of this article. How this end is to be obtained, is worthy the study of the best minds of the Commonwealth; a subject for the investigation of which this department was created, and the establishment of which was the product of the co-operation of a few workingmen.

Thorold Rogers, from whose address, delivered at the co-operative congress of 1875, we have before quoted, says, speaking of that school of political economists who ignore the subject: "I admit that many of my brethren have, especially in past times, concerned themselves with the production of wealth too exclusively, and have neglected, for reasons once intelligible, the far larger and more fertile inquiry into the causes which retard or further its distribution. To be plain, I do not care one jot for rich people. I think they gain infinitely more from society than they confer upon it. The existence of many among them is a simple, unmitigated, unequivocal mischief. I am not concerned with the process by which they accumulate their resources. I am mightily concerned with watching, and, in my humble way, encouraging the process by which the nation makes progress, and by which it secures to itself the benefits of civilization."

He believes that the best aid to this result is co-operative production. Doubtless, this is true; but the important question now to solve, is how to co-operate. England, with upwards of 1,200 societies and 400,000 members, with all the favorable conditions heretofore mentioned, together with the aid and counsel of the ablest and wealthiest of her citizens, including Gladstone, John Bright, the Bishop of Manchester, and a host of others, with all these influences, she has but learned the primary lesson of co-operation,—the conducting of a store on joint-stock principles, with the additional ele-

ment of a bonus to purchasers, and a per cent of the profits to educational purposes.

Yet with all of these favorable conditions, and after sixty-four years of agitation and experiment, Walter Morrison was forced to confess, and the secretary of the central board of the co-operative congress confirmed the statement, that the proportion of failures was as one in three. How then can the heterogeneous masses of our manufacturing and commercial cities be led to co-operate? Says Robert Kyle, at the same congress, "We need not be surprised if the twentieth century should dawn upon us before productive co-operation be established on a large scale in the great heart of society."

In Leeds, the education fund had been used for other purposes.

Thomas Hughes said, referring to the substitution of joint-stock companies for industrial societies, "In some of the most active centres of co-operation, the form of the movement is changing in a dangerous direction."

The central board, in their report, say:—

"The co-operative programme looked forward, as its end, to an immense social reform, to be evolved by the systematic regulation of the exchange of labor on principles of justice, instead of leaving it to be determined by the right of the strongest in the struggle of conflicting interests; yet it demanded, from those to whom the appeal was made to carry it out, no sacrifice of anything which they actually enjoyed; on the contrary, to every one it gave more than they actually received. But it did ask of them to use the new resources given them by their united action, to develop all the advantages which wise union could secure to them, for the benefit, not only of the individuals, but of the class to which they belonged; following, so far, in the footsteps of all true-hearted social reformers, who have always placed the general interest before the special advantage to themselves. We do not despair of seeing this rule of conduct, the principle of practical religion applied to our ordinary life, widely, if not universally, accepted, at least by those classes who would be benefited the most by its adoption. But certainly, at present, little advance to the realization of this hope has been made beyond the first step. The idea of unions through which the con-

sumer may obtain command over the profit on his own consumption has made considerable progress. The idea of concentrating consumption by centres of supply has taken body in the important wholesale societies whose progress we have recorded. But the idea of using the fund thus obtained so that, while it shall be a growing source of pecuniary advantage to the consumers, it shall be also the means of gradually transforming these consumers into bodies of producers controlling their own work as free men should do, and sharing its proceeds under such conditions in relation both to capital and custom as they may consider just, has scarcely made any progress at all."

Mr. Mitchell said: "If a hundred men formed a joint-stock company, and employed themselves, where was the difference between that and a co-operative store?"

Mr. Holmes said: "The word co-operation expressed just what those who used it meant by it. Co-operation might be a pack of wolves united to drive a flock of sheep over a precipice; but that was not the co-operation that the early promoters of the movement had in their minds. He wanted a clear distinction to be drawn, and he would draw the distinction in this way: Private enterprise sought to advance the whole by each individual advancing himself; co-operation sought by advancing the whole to advance the individual. In what position did individualism find Rochdale previous to our present movement? The clever, the cunning and the selfish had oppressed the people to that extent that they were powerless as individuals, and they sought to unite for general purposes, and through the general to benefit the individual. They did this, and did it well. But there came a reaction." . . .

"Co-operation sought to advance the whole by means of propagandism; co-operators had established a co-operative organ; and they held meetings. The Civil Service Supply Association had done nothing for the public. It was true that a great many people who were well off gained an advantage in buying their goods cheaper, but nothing was done to introduce the benefits of co-operation among the poor and ignorant. The motto of the Civil Service Supply Association was, 'Each for himself.' Co-operation, on the other hand,

though the movement was in its infancy, aimed to spread itself all over the world."

. . . . . .

"He did not agree with those who defined co-operation to mean making as much profit as possible, and dividing the whole of it. He repeated it, that co-operation meant working for the benefit of the whole; and acting for the benefit of the individual was only private enterprise. When a society divided its profit wholly between capital and the trader, and neglected the laborer, it was not co-operative; on the other hand, to divide profit with capital, labor and trade, was co-operative."

Mr. Neale, in his essay on a "True co-operative action between producers and consumers," says:—

"In distributive societies the workers are associated not as workers, but only as consumers. The work involved in the production of that which they consume lies beyond their immediate vision. The work done in the process of distribution forms so small a part of the whole, contributes so little to the profit earned, that it has been ignored altogether. Thus, those whom the consumers employed to do the work of distribution for them, and who were necessarily their employés, naturally slipped into being regarded as only their servants, and were looked upon with that mingled feeling of contempt and distrust with which servants are apt to be considered in the competitive world,—as inevitable plagues, to whom the least possible facility for teasing should be conceded. So far from occupying the post of the highest honor, as, in any society where a truly healthy moral tone prevailed, those would do who rendered any common service, and the more so the more that service was in its own nature unpleasant, it has been a common rule in distributive societies that no servant of any society can be a member of its committee of management; and only of late, and in a few instances, has the notion of giving them a direct interest in the business conducted by them, by making their earnings in any degree dependent upon its prosperity, gained ground. Now, as in other cases, we find that social organizations tend, in proportion to the hold obtained by them on society, to intensify the feelings they embody; so has it been in this case. The fact

that in the distributive societies in which co-operation has taken body in the United Kingdom, the worker has been only the servant of the consumer, who has appropriated all the profit on his work after paying a moderate interest to the capital embarked in the business, has given birth to the notion that this is the true normal relation between production and consumption. A theory has been set up which, appropriating to itself the noble name of Federation, a name long before given to a widely different form of union, has justified this appropriation by two specious arguments,—first, that profits naturally belong to the consumer, since he pays for them; second, that to distribute the profit of work among the consumers is a means of raising the whole body of workers all together by the profit on their own consumption, instead of raising some over the heads of the others, as must be the case where the worker receives the profit on his work, unless the whole body of consumers could be set to work co-operatively at the same time. And this reasoning has been put into practical application in the productive establishments now set up by the wholesale, which are simply extensions of their distributive system, carried on by workers who are mere servants of the society of which they never can be members."

After speaking of the great advancement in methods of production, he says:—

"Who should have the benefit of this quicker, better work, or these improved methods? Certainly not those who did not do their work or introduce the method to the exclusion of those who did. Yet this is the logical conclusion from the premise that profits belong to the consumer, on which the wholesale founds its present system. It means this: profits should be dealt with on the principle of a Dutch auction, and adjudged to the lowest bidder. Always those shall have them who do not make them, not those who do. To state such an argument is to refute it logically. Would that it were equally easy to put an end to the disposition to act upon it practically!.

"But is not the consumer, then, to have any share in these profits? Undoubtedly he should. He should, according to the rules of that equity which co-operation seeks

to introduce, which embodies the divine maxim, 'Freely ye have received, freely give.' He should, according to the rule of actual practice. Superiority, whether of bodily organization or mental capacity, is a free gift of God to its possessors, which those who have should use for the common good, not seek to monopolize for their individual benefit. The practical application of this rule appears to involve an equal division with the consumer of the profits arising from any improvement of production. We know that this has not been done. The selfishness of the producer has led him to act toward the consumer as the consumer is now seeking to act toward him,—to monopolize profits as far as he can. But what men would not do spontaneously, by rising above natural selfishness, nature has compelled them to do by the conflict of their selfishness with each other. The inventor or improver has not been able to keep his secrets. Other men have learned to use them, and have calculated, that, by the increased sales, caused by diminished prices, they might gain more than by larger profits on fewer sales.

"The profits of production have thus been largely shared with the consumer through the pressure of competitive self-seeking. It remains for the co-operators only, to do by agreement, on reasonable principles, without the waste and other evils of competitive warfare, what, by this natural process, has been more or less perfectly done without any agreement."

Such is the plea of English co-operators. They state freely their dangers and difficulties, their hopes and fears. That an important crisis in their history has been reached, is evident; but they have already overcome so many obstacles in the past, they are not dismayed as to future work.

At the congress, from whose proceedings we have quoted, a grand plan of international co-operation was well received. We have given space to the views of our transatlantic brothers, because of their large experience and greater co-operative ability. It will be noted that their statements agree with the proposition that the moral difficulties are greater than the financial; yet the latter must not be overlooked. The raising of the large sums of money necessary for successful co-operative production, requires an extensive organization and an unlimited faith. The religious societies of the world have

thus far exceeded all others in this direction. Propagandism is with them a prominent element. They have the organizations and the faith.

The working classes in this country have no organization to which they are bound by faith or hope. They are isolated and not amalgamated. Those who have been able, from any source or cause, to reserve any of their wages, are exceedingly cautious and prudent in their investment. The savings bank is to them the safest and best method. In some few instances they have allowed their employers its use without security, and their experience has, in many instances, proved disastrous.

It has taken nearly half a century to overcome the old habit of hoarding without interest, and the strongest motive in this was safety. When they can feel that co-operative efforts are equally safe, this class will seek that kind of investment, and then it will not need help from their hands.

The possibility of inaugurating co-operative distribution has been proven. The small amount of capital required, and the simplicity of the plan, render it financially practicable.

The distributive stores that have succeeded, as in Worcester, Natick and Springfield, are consequent upon the character of those engaged in the management.

The agent of the Somerset Co-operative Foundery says, "We selected our own men, and even then, had we not been successful, it is doubtful if we could have held them together."

At Andover, Fall River, and some other places, the clanship of occupation and race have aided them.

To render co-operative efforts of use in the solution of the labor problem, requires the existence of those moral elements that come from enlarged views of life and duty, but must follow increased opportunities for thought.

The narrowness and selfishness that looks only to the wants of the present, that ignorantly boasts of its superiority in skill, that causes the mechanic of one trade to ignore the claims of his fellow-laborer of another calling,—these must disappear before co-operation can be possible.

PART III.

MOTIVE POWER OF MASSACHUSETTS.

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MOTIVE POWER OF MASSACHUSETTS;

OR, THE LABOR OF THE SUN.

George Stephenson, the great English engineer, was the first to call the attention of the world to the fact that the comfort, convenience and economies of life in these days depend largely upon our ability to harness the heat evolved by the sun in the past, in the production of either heat or power to-day. Thus the sun raises, by evaporation from sea and land, water, which is transported through the air, and, falling on the highlands, descends toward the sea, moving water wheels and carrying factories, flowing through pipes and artificial conduits into our houses and buildings, and carving out the great river estuaries, and filling these harbors with the waters to float the great ships of commerce. Again, the treasures of the coal mines are proved by science to be only the charred remains of ancient vegetation, in which the primeval sun has done his work of decomposing carbonic acid and water into their constituent parts, storing the carbon and hydrogen in the vegetable, now become coal, and releasing the oxygen to the air, to be again combined into carbonic acid and water, with evolution of the heat originally required for the work of decomposition.

The statistics of the census of 1875, in water power and steam power, fairly may be classed as representing the labor of the sun in industrial operations in Massachusetts.

We are accustomed to speak of the great improvements of our time; but there is a fixed epoch in the world's history,

forming, apparently, the point of departure of modern history and modern society, to which, in considering the work of our day, it is worth while to refer.

This date, the middle of the thirteenth Christian century, marks the beginning of our times. The foundation of English liberties had just been laid in the great charter of King John, and the confirmation and forest charter of Henry III. It was the time of Rodolph of Hapsburg, and Alexander Nevskoi, the founders of the Austrian and Russian empires. Italy and the Moorish caliphates had recently undertaken the manufacture of silk. The Mediterranean commerce was in the hands of the Italian cities. The Hanse towns, and the free cities of Flanders and Holland, were merchants, manufacturers and fishermen. The first German trading factory had been established in London shortly before, and Anglo-German commerce had just been systematically inaugurated. The condition of industry was very primitive. The copper mines of Cornwall had not been discovered. Zinc was not produced in Europe. The product of gold and silver was supposed to equal the wear and tear of coin and plate. England produced no iron. The first mention of the mining of coal, as an industry, appears towards the close of this century, in the charter of Newcastle. Cast iron, except as an accident, was unknown, and the waste in working by the Catalan forge and the German stuckofen was so great, that the slag heaps of that day are found to contain sixty per cent of iron, and have been in our day profitably reworked! Gunpowder was not efficiently used in European war till the beginning of the fifteenth century, and the battle of Pavia, in 1525, was the first ever won by musketry.

Paris, Cambridge, Bologna and Oxford were the seats of learning; and the studies of a university education were,—grammar, logic, rhetoric, music, arithmetic, geometry and astronomy. The study of law, as a science, had just been revived, and the oldest sea codes and the Castilian Siete Partidas date from about this period. Banking, exchange and insurance can be traced in elementary forms to this epoch. The mariner's compass (that is, the magnetic needle mounted on a pivot, and inclosed in a box swung in gimbals) had not

been invented, though the property of a magnetic needle to point north was known, and the observation and study of its variations begins with Columbus in 1492. The paper manufacture began a hundred years later in France, and two centuries later in England.

There were no chimneys nor glass windows in the houses, and for several centuries afterwards glass windows were furniture, and not part of the house, and were taken out and stored when a house was unoccupied. Every man carried around his own knife to eat with. One or two drinking cups sufficed for a house. Four beds are mentioned as an extravagance in the house of an English gentleman in the sixteenth century. Most of the clothing was leather, and yet the total appraisal of a tanner's stock at this time was less than £10, or allowing for difference in value of money, $1,000 of our day. A carpenter's chest of tools of the period consisted of five articles and was valued at a shilling,—say $5 in our money. Maize and potatoes were unknown. Wheat, under their unskilful culture, is thought to have yielded about nine or ten bushels to the acre. In England, cabbages and parsnips seem to have been the only vegetables common, and, on the Continent, turnips and carrots. Sugar was an imported luxury, used only by the great, and tea and coffee were unknown till A. D. 1600, and were luxuries for a century later. The common kitchen spice-box, and its contents, was absolutely unknown.

The water powers of Europe were unused, save in the smelting regions, where a rush of water through a funnel, into and down a vertical air-box with air-holes at the top and an air and water tight chest at the bottom, was sometimes used to produce a blast with a few pounds' pressure, such as is now used in the Catalan hearths of the Pyrenees, and save perhaps that a few undershot wheels, drove at that time the wipers of a few light trip-hammers. The steam engine of Hiero of Alexandria still remained a toy. Breadstuffs were ground in hand-mills, and occasionally by windmills.

The European of that day was a great advance upon the savage, skin-clad or naked, of earlier times, dwelling in caves and having only stone and bone and horn implements. But his clothing was no better than that of the Persians in

the time of Darius, or the Romans of Cicero's days. The metallurgy, except in the certainty with which steel could be made at enormous cost by the armorers of Milan, Toledo and Damascus, had not advanced beyond that of the Romans of the time of Cæsar. Other industries were about where the Egyptians left them. The maritime carrying trade was not improved beyond that of the Phœnicians and Carthaginians, except by the introduction of mercantile sympathy and co-operation in the matter of exchange and insurance. Population about held its own; but it is estimated that the average life of those under twenty was only ten years. Extensive epidemics prevailed, and almost every nation in Europe underwent a famine as often as once in ten years, and scarcities more frequently.

The noticeable difference between that time and now is the improvement in the value of man, the change in the employment of capital and power, and the increased comfort and happiness of the world. And it is these lessons that the power statistics of the census teach us.

A horse power in mechanics was so named by James Watt because it represented the utmost efforts of the strongest horses during short intervals; and it is that amount of energy which is equivalent to the continuous raising of 33,000 pounds at the rate of one foot in a minute; and with a good engine it is roughly represented by the evaporation of a cubic foot of water from a temperature of sixty degrees Fahrenheit, under a pressure of fifteen pounds to the inch in an hour. Considering the losses it suffers when generated by coal, or by falling water, and transmitted through shafting and belting to the working of machinery, it may be estimated at the extreme physical exertion of six men. It ought to cost an expenditure, in the ordinary engine in use in the State, of about six pounds of coal an hour, or say eighty pounds of coal a day. This, with coal at eight dollars a ton, gives the cost of the physical force of a man daily at less than six cents in coal, and less than twenty-five cents upon an outside estimate, to include interest, depreciation, rent, insurance, attendance, oil, repairs and all other loadings, properly chargeable to power.

Manufacturers of machines used in industrial occupations are much in the habit of estimating the power required for them as delivered horse power,—that is to say, as the power absorbed in the machine itself; and manufacturers of engines have consequently been obliged to make allowances in their engines for the power absorbed in running shafting, etc., and grade their engines at less power than they actually deliver. An empirical formula, taking into account the dimensions, velocity, working pressure, condensation between the boiler and engine, and average loss by friction and transmission, has given the result of the census' tables "actual horse power," as the potential energy actually delivered from the engines to the main shaft. This result is larger than the estimated power, from the fact that the estimates are usually made on a velocity and pressure much lower than that at which the engines are intended to work, so that there may be no failure to carry the mill in the outset. A similar rule prevails with regard to water wheels, but the elements of a calculation about them are of a more difficult character, and are to be taken account of specifically in each case, and two of them are exceedingly variable and difficult to obtain; namely, the weight and the velocity of water flowing through the wheel. The adaptation of water wheels to their conditions of use is also generally done for the particular instance in each case of any great importance; so that, though probably in all instances there is a percentage more of power delivered to the main shaft than the estimated power, it will not be so largely in excess as in the case of steam, and may be safely assumed as reported, in considering the value of the sun's labor in Massachusetts in terms of men.

This power is substantially all employed in manufacturing operations, in which it appears that 316,459 persons are employed, or about a fifth of the population of the State.

The following table exhibits the steam and water power of the State in the different industries, with the number of persons actually employed in those industries, May 1, 1875. But in this table the number of persons employed is only given for those industries in which steam and water power is used;

while the total number of persons employed in manufacturing industries is 316,459 :—

INDUSTRIES.	Persons employed.	Steam Power.			Water Power.	
		Engines.	Nominal power.	Actual power.	Water wheels.	Nominal power.
Agricultural implements,	1,131	13	597	1,158	31	877
Arms and ammunition,	1,169	8	352	683	18	753
Artisans' tools,	1,589	23	251	487	69	1,506
Bags and bagging,	233	2	325	630	–	–
Boots and shoes,	48,536	242	4,454	8,641	4	176
Boxes,	1,565	52	1,674	3,247	72	1,295
Building,	4,031	39	1,014	1,967	7	101
Carpeting,	3,158	10	1,210	2,347	6	765
Carriages and wagons,	3,157	30	591	1,146	26	448
Chemical preparations,	201	8	154	299	–	–
Clocks and watches,	1,140	3	14	27	1	2
Clothing,	14,443	35	1,280	2,483	6	250
Cotton goods,	50,738	131	20,895	40,536	292	32,959
Dress trimmings,	278	3	24	46	–	–
Drugs and medicines,	372	3	85	165	–	–
Dyestuffs,	–	2	450	873	–	–
Fertilizers,	304	8	376	729	3	50
Food preparations,	4,760	97	3,240	6,285	181	4,390
Furniture,	6,712	77	2,797	5,426	110	2,405
Glass,	1,226	9	296	574	2	30
Leather,	6,774	198	4,389	8,515	63	1,661
Linen,	779	3	225	436	6	225
Liquors and beverages,	899	37	748	1,451	7	86
Lumber,	2,095	102	3,733	7,242	521	10,562
Machines and machinery,	9,323	194	5,366	10,410	74	2,183
Metals and metallic goods,	17,539	218	11,741	22,777	135	4,991
Musical instruments and materials,	2,263	22	591	1,146	1	10
Oils and illuminating fluids,	682	26	980	1,901	–	–
Paper,	6,792	66	3,020	5,859	298	14,527
Printing and publishing,	5,698	80	916	1,776	4	114
Print works,	1,769	104	6,945	13,473	40	4,294
Polishes and dressings,	115	6	165	320	–	–
Railroad construction,	537	12	615	1,193	–	–
Rubber,	1,054	12	1,570	3,046	–	–
Saw and grist mills,	–	–	–	–	162	3,008
Scientific instruments and appliances,	375	6	179	347	2	40
Stone,	2,560	34	775	1,503	–	–
Tobacco,	1,451	1	3	6	3	120
Vessels,	1,463	12	325	630	1	8
Wooden goods,	4,363	82	2,975	5,771	164	3,751
Woollen goods,	18,478	129	7,923	15,370	309	13,994
Worsted goods,	1,499	6	865	1,678	15	955
Miscellaneous manufactures,	22,840	363	13,179	25,567	96	4,846
Totals,	253,941	2,511	107,307	208,166	2,729	110,582

The power consists of,—

Steam (horse power),	208,166
Water (horse power),	110,582
Total,	318,748

Equal to the labor of 1,912,608 men. Now, if we consider that it would require a population of five to one to correspond to this manufacturing power, it would make an enormous increase in the human value of Massachusetts on the scale of past times. But this would hardly be fair; while considering the ratio of families to persons in productive industries, it would not be fair to make the ratio less than 3 to 1. This would give to Massachusetts a producing capacity equivalent to a population of 7,389,736 souls, or about $4\frac{1}{2}$ times as great as it is now.

In other words, the productive value of a resident of Massachusetts is at least four times as great as that of a burgher of Ghent, or a subject of England or France, at the time of the Great Charter and the Crusades, and the productive value of the State is more than three times that of all England at the same period.

This increase of productive capacity having been achieved by machinery so devised as to convert, as we have said, the stored heat of the sun into present power, it is interesting also to consider the fact, that the conversion is made by means which render permanent and of present productive value the mental and physical labor of inventors and workmen in the past. A labor-saving machine may be defined as a contrivance by which the dead still work. The boiler, the engine, the water wheel, the shafting, the belts, the manufacturing machines, all present instances in which labor performed in the past is efficient in the production of to-day. The hand no longer throws the shuttle. The heat of the sun in the carboniferous era gives the force, the intelligence of Edward Herbert, Marquis of Worcester, of Newcomen, of James Watt, of a score of builders of engines and their workmen, still working in unconscious iron, convert the heat into motion and do the weaving of the world. The permanent character of that part of the labor, intellectual and physical, of inventors and mechanical artisans which characterizes the implements of modern factories and shops, has had this phenomenal result, that it has practically enabled one generation of men to do the work of four.

And yet the influence has not been alike on all industries. In horology, twenty-nine horse power, or the physical force

of 174 men, representing on the scale we have chosen a population of 522, supplements by the aid of accurately thought-out machinery the work of 1,140 souls, representing a population of 5,700, and by the aid of this very machinery in which human thought is so formularized in metal as to go on forever with the cheapest power doing the work of very competent men, represents a far greater increase in the production of clocks and watches than the average ratio of 4½ to 1, while the 20,386 horse power of the paper workers which supplement the labors of 6,792 souls in the business probably represents a less productive ratio. In the one case, the watchmaker represents the physical force of 1.15 men. In the other, the paper worker represents the physical force of more than 18 men. In textile fabrics, with 70,715 work people, we have 105,492 horse power employed, representing in each operative the physical force of nearly 9. The hard work of the leather business is done for 6,774 persons by 9,576 horse power, while the 1,565 box makers consume 4,542 horse power. The horse power called directly to the assistance of the worker on tobacco hardly amounts to half the work of a tender to a man, while the makers of carpeting employ a horse power to an operative. The 48,536 boot and shoe workers, with their infinite subdivisions and wonderful use of highly organized machinery, only employ 8,817 horse power, or about a man power each beyond his own force, while the furniture artisan employs 1.1 horse power, and the lumber workers, 2,095 in number, employ 16,865 horse power, giving each a physical equivalency of about fifty men. In the manufacture of food preparations, only 4,760 persons are employed in the State, much of our food being imported, yet they consume 10,010 horse power, having a productive equivalency of more than 12.7 to 1.

These comparisons might be indefinitely extended, but enough has been shown to illustrate the productive capacity of labor performed in the past, the reproductive faculty of modern labor.

And it is labor thus rendered reproductive, stored and made generative, that we call to-day, capital. The capitalist of to-day is the natural ally of the laborer. He it is who with the stored labor of the past still generative, efficient and

vital, gives to the laborer in one calling a hundred-fold efficiency, to another a fifty-fold efficiency, to some more, to some less. He it is who brings, by rail and boat, food to the countries which convert and create non-edible products, and carries clothing to those who would either be naked or cease from work at their best production to clothe themselves. In this modern use of stored and regenerative labor, a communal system has been revived, and the men are gathered into factories where power and machines are set up, where co-operative subdivision of labor exists, and where special facilities are provided, and special faculties selected and improved. The weaver of Ghent and Bruges, in the thirteenth century, of Spitalfields early in this century, the shoemaker of twenty years ago, worked in his own house and was comparatively his own master. But his hours were longer, his fare more meagre, his clothing poorer, his comforts less than those in similar occupations to-day.

The list of necessaries of life is now a long one, and that of distant luxuries still longer, for all of us; but the experience of life insurance, and our own statistics, teach us that human life has lengthened since the time of the tables of Carlisle, and no cause can be assigned for this but a general improvement in bodily comfort and environment. This can have but one reason,—the increased productiveness of daily labor,—caused by the generative and reproductive energy of the stored labor of old time, and the harnessing of the sun to the hard work of to-day.

An instructive contrast is presented between the use of capital in the old time and now. Richard of Cornwall was in the thirteenth century the richest man of Europe. His tin mine royalties brought him in great revenues, and he hoarded them. He is said to have carried out of England 700,000 marks, equivalent in our money to about $45,000,000, and spent it all in bribing the electors and princes of Germany to crown his personal ambition by an election as king of the Romans, a position in which he hoped his power would gratify his avarice, and, by burdening industry, repay him his purchase money, with usury.

The three men of great fortune who recently died in this country,—Astor, Stewart and Vanderbilt,—with larger capi-

tals than that of Richard, employed them very differently. One furnished houses of first-class character to his lessees at moderate rates; one devoted his life to learning the wants and tastes of the community and gratifying them; one furnished and controlled transportation facilities. Each and all gave personal and constant supervision to his affairs; and each and all found alike the source, the investment and the reproduction of his wealth in an improved condition of mankind. These men, and the acquisition and use of their property, are types of their period, as Richard's is of his period. And to them, each in his own sphere, labor stored and generative, and the sun harnessed to the daily work of the world by the talent of man, was an immense source of revenue.

This marked improvement in mechanical results, this wonderful control of man over motive power, is accompanied by as marked improvement of the condition of man, and establishes the proposition that demand, so far from preceding supply, increases parallel with it, accommodates itself to it, and, in many instances, is created by it. Certainly it is a current use of language, in considering a new enterprise, to say, Can we create a demand for it? Owners of property desiring to sell or let it, often offer to supply things the other party to the transaction does not particularly desire, to carry the transaction through; and purchasers or hirers often suggest the absence of things they do not want, to obtain an abatement of price.

Two or three notable instances of improvement will illustrate this. Glass windows were at their first introduction furniture, subsequently they became fixtures, and finally a part of the house. Yet within a century the aura of their original condition had so much power that English statesmen imposed a window tax as well as real estate taxes, and the objection of double taxation was hardly advanced against it. The early water supplies of great European cities consisted of aqueducts, conveying water to certain public squares, where fountains were erected, and whither the neighborhood came to fill their pitchers and buckets. By slow degrees, the introduction of water into houses was effected, at first by having a water tank filled daily from the main through a stop-cock, opened only by an official, and closed when the

tank was full; afterwards by piping the house, then by adding heating apparatus, and having hot and cold water instead of cold water only, until to-day we have running water on every floor and in almost every room. Men of our own day can remember, in Boston, the tank in the cellar, into which the Jamaica Pond water was drawn, and the very gradual introduction of the extensive household water works now in use. This was done more largely and rapidly in houses built for sale and for hire than in those actually owned by their occupants. Gas was similarly introduced, more rapidly by builders building for sale than by persons occupying their own houses. These are clearly instances in which supply preceded demand. So also with the introduction of new tools and appliances of various sorts,—hot-air furnaces, steam-heating apparatus, the cheap transportation of cities and large towns by omnibus, barge and horse car. The production of a convenient thing, suitable for household use or for business, the acquaintance of the public with this product, the limited introduction of it, its exposition for sale, create the demand.

The wants of a free people increase as fast as their means of supply, and continually stimulate increased production by the individual. Contentment with one's lot is the virtue of the subjects of a despotically governed and non-progressive state; and self-denial is the virtue of a poor and unprosperous people.

In every improvement in production, whether in means of tillage, or in conversion of raw into manufactured articles, the change works injury to some, and benefit to others. Doubtless Elias Howe was cursed thirty years ago for inventing, and the great sewing-machine companies for introducing, machines which would deprive seamstresses of their means of subsistence. But it can not now be said that the number of persons getting their bread by sewing, by machine and by hand, bears a less proportion to the population than it did then, while their work gives better and larger results, and the clothing of the world is cheaper and better and more frequently renewed because of this invention and its development.

Again, take the application of explosives to mining operations. Does any one doubt that it has, in the long run, eased

the labor of the miner, cheapened the product of the mine, increased mining operations, and increased the demand for mining labor, thus raising the wages? Of course the introduction of any improvement in the arts creates a temporary disturbance and demands a readjustment of relations. But we are to consider results when they have all resulted, and not at the moment of disturbance. If we were required to measure the quantity of water in a cylindrical vessel partly full, and had no means of measuring anything but the height at which the water stood, nothing to empty it into, no recollection of the number of cubic inches in a gallon, and only a quart pot and a pail for measures, there would be but one way to do it,—take the depth before and after taking out a pailful, measure the pailful and multiply the quantity in the pail by the quotient found by dividing the greatest height by the difference in height. We should, however, in getting the two heights, have the water in a state of rest, and not in motion caused by the disturbance of taking out and putting back the water. The fallacy of persons who object to the introduction of labor-saving machinery is, that they measure the disturbance and make no account of the readjustment.

The introduction of printing from movable types enabled us to *multiply* copies of books instead of *adding* them, painfully, letter by letter. Doubtless, the copyists of the time suffered; but does any one doubt that more men are at work at book making, and with better pecuniary results now than before the time of Fust and Gutenberg? Yet, readjustment was not fully accomplished till within a century,—that is, till authors abandoned the compensated dedication of books, emancipated themselves from the patronage of the great, and trusted to the public to recognize merit.

Power spinning, the stocking frame, improved methods of weaving, undoubtedly caused disturbance in the wages and in the employment of very many men. Riots of the unemployed occurred, but demand soon readjusted itself to increased supply, and the work of men was demanded for making the machines as well as for making the goods.

City passenger railroads were introduced into Boston in 1855. To avoid disturbance of certain social and industrial conditions existing, the railroad corporations bought off the

omnibus lines previously existing on their routes. The labor performed by the horses is far more efficient in moving a car over the iron rails than in moving an omnibus over pavement; certainly in greater proportion than three to one. Hackmen, livery-stable keepers, and all consumers of horse-flesh felt it. The same sort of economy of power was, about that time, inaugurated in other cities of the United States. The disturbance has readjusted itself in twenty odd years of street railroading, and the price of the quality of horses used for this purpose has risen from twenty-five to fifty per cent, and with it the cost of almost every article used in the service of the railroads, while the fare has remained at a minimum. As a general rule, wages have also increased, and yet, as a rule, net earnings have not diminished. The reason for this is shown by the statistics to be an adjustment between the demands of travel, and the accommodation whereby economies are effected and the best results obtained.

Another instance within the observation of every middle-aged man confirms our line of remark, that the result of the increased facilities of production is the increased advantages of the individual. Successful electro-plating with silver was first introduced as an industrial art some thirty-five years ago. Before then, silver surfaced articles were made of good quality, either of solid silver, or of copper and silver in thin sheets or bars, soldered together and then stretched. An early result of the introduction of electro-plate was the practical destruction of the rolled-plate business, and a later result has been the serious diminution of the silversmith's handicraft. But the use of silver surfaced articles has spread from the rich and middling classes toward those less favored by fortune, more money is invested in electro-plate than was before in rolled-plate and silver, the convenience, neatness, comfort and economy of using a non-corrodible instead of a rusting metal, and a comparatively light-plated article instead of a heavier one of silver or pewter, and a comparatively stiff and elastic article instead of a comparatively soft and flexible one, has resulted in placing a plated spoon in the mouths of rich and poor alike.

There are two factors of prosperity in the condition of man, generally acknowledged and well understood,—earnings and

purchasing power. But beyond these is a third, which is an exponent as well as a factor,—the promotion of luxuries to the grade of necessaries of life.

The needs of society increase from generation to generation. The power to supply them has increased from time to time. Man has already acquired control of a means of multiplying his physical force. He has already acquired means of formularizing much of his thought in metal, and of producing with that many results by mere application of power which formerly required the slower and more uncertain operations of the hand, controlled by the sensitive brain. He has solved the problem of making the thought of one age control the stored power of a former one to do the work of a third. He has made of fire and water his servants, and by his engines harnessed them for his hard work. The individual claims the reward of an improved condition and environment, because of the conquest of nature already achieved. He has got it. So much has his stature increased that the average armor of olden times would be a very close fit for the average man of the same nation to-day. His chance of life has increased, within historic times, at least ten per cent. His productive power has increased fourfold; and there is no question that his demands for consumption have kept measurably near the producing capacity, and, whether it be a cause or a consequence, the reflex action of stored and regenerative labor, and of the sun harnessed to the hard work of the world, has been that the entire producing capacity of the world is needed to supply its fullest wants, that periods of scarcity and leanness are less felt, operate more upon reserves and luxuries than upon actual present necessities and have less permanent effects, although from the happy condition of discontent with one's lot which superior condition and environment has brought about, they are probably more generally discussed and more searchingly investigated and more intelligently guarded against and remedied than ever before.

PART IV.

THE AFFLICTED CLASSES.

THE BLIND, DEAF, DUMB, IDIOTIC AND INSANE.

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In the family schedules distributed by the census enumerators in the spring of 1875, information was solicited concerning certain afflicted classes in Massachusetts,—the blind, the deaf, the deaf and dumb, the idiotic and the insane. The facts sought for were to embrace not only the actual number of individuals in each of those classes, but were to include also data of the causes of the disability. These accumulated facts touching the numbers, age, sex and locality of the people in this State affected as above mentioned, and touching also the causes and duration of their infirmity, have been submitted to an analysis of which it is the aim of this paper to give the results.

These afflicted classes are inevitably a burden upon society. In proportion to their disability, the blind, the deaf-mute, the idiotic and the insane are dependent upon their fellowmen for sustenance. They eat the bread which they do not earn, and consume what they have small part in producing. They are the unfortunate and pitiable objects of human commiseration. Happily, in these latter days, enlightened philanthropy has done unspeakable good in alleviating the condition of these, the unsound in mind and body; and the State does well to honor the memory and the labors of those who, with assiduous devotion, have wrought out the methods which give light to the darkened eye, reason and self-control to the clouded mind, and speech to the mute tongue.

It is one of the functions of the census to determine the statistics of these classes, to ascertain the amount of this burden upon the State, and to find its relative increase or diminution at intervals of ten years. This undertaking is of modern origin; it had no place in the census taken under the Servian constitution of Rome, nor in the enumerations under the Mosaic law. In England, a country to which we are accustomed to look for all that is excellent in these matters, it was not till 1851 that the afflicted classes were numbered; and it was not till 1871 that a complete enumeration, embracing lunatics out of asylums, and idiots and imbeciles, was made. Of 32 governmental census returns made between 1860 and 1870 in Europe and the United States, Dr. Jarvis found only 24 which gave statistics of the blind, 29 of the deaf and dumb, 16 of the insane, and 14 of the idiotic. It is believed that the recent census of Massachusetts attained in these respects a completeness as regards details and fulness of data beyond anything hitherto secured, at least in this country.

The "prior schedule," or "family schedule," used in this census, possessed especial advantages as a means of acquiring the desired facts, in that it permitted deliberation and family consultation preparatory to the filling of the blanks. Even in cases in which the head of the family failed for any reason to fill the schedule, the census enumerator found the information awaiting him and ready for his record with much less delay and inaccuracy, than would have been the case under the older method of house-to-house visitation, with the requirement of unpremeditated answers to personal, and in many respects, disagreeable questions. An inspection of the schedules, as returned to the bureau, shows abundantly that householders and heads of families appreciated the utility of the work to which they were called to contribute; an honest and conscientious purpose to fulfil the request made is apparent in almost every case.

It is to be remarked, however, that a valid claim of absolute accuracy can hardly be made in behalf of all this accumulated information. It is to be understood that these returns afford an approximation only to a correct statistical knowledge of the afflicted classes in Massachusetts; and while

we have no hesitation in asserting that the present census has surpassed all previous similar attempts to gather this knowledge, we are yet free to grant the limitations to which all such endeavors are subject. To fulfil the requirements of scientific accuracy in results, would necessitate the application of scientific tests and methods in gathering the data for those results. The statistics here analyzed are supplied by the people themselves concerning their own physical condition, or that of kindred or dependents. In only a portion of the cases do we have the aid of professional medical skill in supplying the original facts. The hospitals and asylums give, indeed, the best information attainable with regard to certain of the classes under consideration; and it may be remarked, too, that in a great many individual instances we have the reflection of skilled medical opinion in the returns, the nature, degree and cause of the infirmity being entered in the schedule in accordance with the previously expressed view of the family physician, or of some specialist from whom relief was sought. But there is a great mass of the material which is based substantially upon personal, unskilled judgment; sometimes, indeed, the basis has a flavor of the fanciful and the superstitious.*

These reflections upon the character of the statistics returned are designed to promote a more intelligent understanding of the results reached, without, however, an undue disparagement of their value,—to point the way to better methods, without decrying the improvements already attained. The kind of knowledge which the census gives is of more moment than its amount or variety. "The tendency toward complexity in the nature of the returns must always be checked," says Dr. Farr, "by the liability of the people at large to make blunders and create confusion where they are required

* For the purpose of acquiring full information of the classes here considered, the plan pursued in the Irish census of 1861 appears to have some special advantages, although it involves an increase of labor and trouble. The family schedule, which gave the name, age, sex and locality of the afflicted person, was supplemented by a new set of special inquiries for each person so returned. This special requisition embraced facts with regard to causes, correlative infirmities, and many other circumstances touching the defect. The commissioners well remark that "had these minute inquiries been made upon the original householders' schedules, the returns thereto might, by imposing too heavy duties upon those who filled or collected the forms, have been either defective or have interfered with the accuracy of the general enumeration."

to attest facts not of the most obvious nature, and by the difficulty of getting a sufficient number of subordinate officers to understand and carry out a complex classification." The time will doubtless come when, instead of relying upon the statement of individuals that their children are "dumb" because of the "Massachusetts school system," or "idiotic" because "marked with a snake," or "blind" because "moon-struck," the compiler of statistics of the disabled classes will feel full confidence in his facts, knowing that in the course of their primary enumeration they have been submitted to uniform standard tests, such as are applied for example by the oculist who determines the degree of blindness in his patient by means of the test type, or by the aurist who ascertains deafness and its amount by the distance at which the ticking of a watch is heard. The science of vital statistics is one of slow growth. Experience will continually point out retrospective defects and suggest improved methods. Perfection in the census of a people, as in all other human undertakings, is attainable by slow approaches, if it be attainable at all. The approximations offered in the present instance are the result of a system matured with exceptional care, and are believed to be possessed of exceptional value in point of freedom from the errors both of omission and commission.

The Blind.

The number of persons who reported themselves in this class is 2,512.* This number gives a rate of fifteen blind persons in every 10,000 of the population of Massachusetts, or one person blind in every 657. This ratio is greatly in excess of what has been found by the census of this State in previous years, and in excess also of the proportion determined in other countries. In 1865 the ratio was one in 1,663, and in 1855 it was one in 2,404; both of these enumerations probably fell far more short of the truth than the number in 1875 exceeds the truth. In 1871, in England, the ratio was one blind to every 1,052 persons; in Scotland it

* In this analysis of the statistics of the blind in Massachusetts, the town of Chatham is left wholly out of the account as regards the number both of the blind and of the entire population, the enumeration of persons deprived of sight having been manifestly erroneous.

was one to 1,112, and in Ireland it was one in 852. The magnitude of the aggregate in Massachusetts, as set forth in the census, is to be explained in two ways: partly by the fuller returns made, but mainly by the fact that many have reported themselves as blind who, if special inquiry were made, would be found to be, not totally blind, in the meaning and intent of the prior schedule, but deprived of sight to a very considerable degree; the enumeration has determined a near approximation to the number of persons in Massachusetts who are destitute of vision to a degree which incapacitates them for the usual avocations of mankind.

The subjoined table shows the distribution of these numbers of the blind in the several counties. It will be observed that the proportion of the blind to the population is largest in the rural counties, and least in the counties containing the cities and large towns.

Persons reported as Blind, their number in each County in 1875, and their proportion to the Population.

COUNTIES.	Blind.	Blind in every 10,000 of Population.	Population to each Blind Person.
THE STATE,	2,512	15	657
Barnstable,	73	11	409
Berkshire,	117	17	584
Bristol,	151	11	868
Dukes,	18	44	226
Essex,	292	13	765
Franklin,	70	21	481
Hampden,	172	18	548
Hampshire,	57	13	786
Middlesex,	395	14	719
Nantucket,	11	34	291
Norfolk,	117	13	755
Plymouth,	134	19	518
Suffolk,	513	14	711
Worcester,	392	19	536

The number of those reporting themselves as blind, and their number in proportion to the people, is seen to be in excess, as a rule, away from the centres of population. The cities and manufacturing villages attract the young and the sound from the agricultural sections and from across the

ocean. The old, decrepit and infirm are thus left in excess in the country. These observations are further illustrated by the ratio of blind persons to population in some of the Massachusetts cities. Thus, in Boston (the inmates of the Perkins Institution and of the Massachusetts Charitable Eye and Ear Infirmary being excepted from the account), the proportion was one blind person to every 926 of the people; in Lowell, one in 1,156; in Cambridge, one in 1,167; in Fall River, one in 1,334; in Lawrence, one in 1,126.

Thirty towns in the State appear to be especially favored; their inhabitants report themselves exempt from the infirmity under consideration. But none of these towns have more than 3,000 inhabitants, and their aggregate population is less than two per cent of the population of the State.

Of the total number of the blind, 1,407 are males and 1,105 are females. In proportion to the population, the former are as one to 564 of the whole number of males, and the latter are as one to 775 of the whole number of females; in other words, there are 18 males blind in every 10,000 of the male population and 13 females blind in every 10,000 of the female population. This excess of blindness among the males is undoubtedly due to the greater outdoor exposure of men, and to their greater liability to accidental injury.

The following table exhibits the age distribution of those in Massachusetts who report themselves deprived of sight:—

AGES.	Blind.	Population.	Proportion: One in—
Under 10 years,	96	337,593	3,517
10 to 19 (both inclusive),	283	314,301	1,112
20 to 29, " "	242	310,861	1,285
30 to 39, " "	239	240,966	1,008
40 to 49, " "	313	182,823	584
50 to 59, " "	354	126,430	357
60 to 69, " "	348	79,186	228
70 to 79, " "	414	38,283	92
80 to 89, " "	183	10,126	55
90 and over,	34	1,041	31

It will be observed that in childhood the proportion of blind persons to the general population is at the minimum.

After the age of 40 years, the increase is progressive until, in advanced life, it is found that one person in every 31 is deprived of sight in greater or less measure. In childhood, both sexes share alike the infirmity of blindness; after the age of 20 and until the age of 70, blind men are in excess of blind women; after the age of 70, females are more numerous than males in this class, the excess corresponding nearly with the excess of females in the general population above the age mentioned.

Of the total number of persons reporting themselves blind, 201, or one in 12 of the whole class, are described as "blind from birth." According to the latest English census, the proportion of the born blind to the total of blind persons was one in 11 in England and Wales.

Among the matters included in a study of blindness in any community, the cause or causes of the infirmity are of obvious interest and importance. Information upon this point, so far as Massachusetts is concerned, is afforded as one of the fruits of the late census. Of course, for very clear reasons, there can not be the same exactness in this part of the schedule as in the matters relating to sex, age and occupation, but of the answers returned a very large proportion show intrinsic evidence of genuineness. This being the first attempt to define the causes of the blindness among the people of the State with some detail, we can not make a comparison to show whether through improved skill in ophthalmic surgery, or from other causes, certain kinds of blindness are diminishing. The following table gives a numerical exhibit of the causes as they were returned in 1,618 cases, and includes those cases only which show tolerably well-defined marks of accuracy. The sources of the information upon which this table is founded are to be remembered, and the conclusions to be drawn are subject to modification accordingly. In many cases, the causes assigned are undoubtedly derived from medical consultation; in many more instances, probably in the majority, the decision is that of the sufferer himself, who is not expert in discovering an obscure real cause for his infirmity in the place of an apparent but erroneous one. Such names as amaurosis, cataract, Bright's disease, and glaucoma, indicate the intervention of profes-

sional skill in the case, while other assigned causes show quite plainly that a coincidence has been made to stand as a substitute for the real agency in producing the effect.

1. Accidents by gunpowder,	70	15. Fever, scarlet,	55
2. by firearms,	27	16. typhoid,	7
3. mechanical,	3	17. yellow,	2
4. unspecified,	452	18. unspecified,	26
5. Age,	60	19. Glaucoma,	13
6. Amaurosis,	20	20. Injury of head,	15
7. Belladonna,	2	21. Inflammation,	205
8. Bright's disease,	4	22. Measles,	59
9. Cataract,	238	23. Malpractice,	8
10. Diphtheria,	2	24. Optic nerve, disease of,	28
11. Diseases of brain and nervous system,	96	25. Overwork,	65
12. Diseases, constitutional and specific,	46	26. Retina, disease of,	3
13. Erysipelas,	31	27. Rheumatism,	13
14. Exposure,	23	28. Small-pox,	29
		29. Sunstroke,	16

Gunpowder has had a considerable part in the production of blindness in Massachusetts, the premature explosion of blasts being the chief cause of the injury. Frequently sight is totally lost by this accident, and in many more cases where one eye is destroyed the other follows its fellow by sympathetic inflammation. Accident by firearms, including the mischief done by percussion caps, is in the same class.

The cases of lost sight attributed to age would probably be redistributed after a careful investigation. The degeneration of the crystalline lens, known as cataract, would include most of these instances.

Belladonna is given as the cause of blindness in two instances. Whether the drug was given in the form of atropia by a physician for its specific effect to dilate the pupil of the eye, or was taken for other purposes, or was used without medical advice, we are not informed.

Cataract is given as the cause of blindness in 238 instances. The constant progress making in ophthalmic science and art suggests the hope that this cause of lost sight may appear in lessening numbers in the future. Indeed, it was not a rare note to find in a schedule as returned: "formerly blind from

cataract, but sight is now partially restored by means of surgical operation."

Diphtheritic inflammation is charged with having caused two cases of blindness. Probably many more are included in the general class of unspecified inflammations.

Diseases of the brain and nervous system include a variety of causes, such, for example, as paralysis, fits, meningitis, hydrocephalus, disease of spine, headache.

Diseases of a constitutional and specific nature comprise cancer, scrofula, humors and syphilis.

Exposure expresses a variety of assigned causes, some of them of singular character. A considerable number of persons living near the sea attribute their loss of sight to the brightness of the sunlight upon the water. The exposures of army life are blamed by many blind men as the cause of their infirmity.

The mischief done by scarlet fever is partially represented in the 55 cases which place it at the head of the list of fevers in producing blindness.

Injury of the head, blows, falls and the like, caused loss of sight in 15 instances.

Rheumatism produces its harmful effects on vision by attacking the sensitive muscle of the iris, and causing a serious and often irreparable inflammation.

In these days, small-pox does less harm to the eyesight than falls to the blame of either scarlet fever or measles.

Sunstroke is charged with 16 cases of blindness.

At the Perkins Institution and Massachusetts Asylum for the Blind, the principal charity in the State for the reception and instruction of the blind, the number of occupants in May, 1875, was 118; the original causes of the loss of sight in these cases were given in 55 instances, as follows:—

Inflammation,	12	Fever,	2
Accidental injury,	8	Hereditary,	2
Scarlet fever,	7	Amaurosis,	1
Scrofula,	4	Blow on the head,	1
Malpractice,	4	Hydrocephalus,	1
Cataract,	3	Diphtheria,	1
Gunpowder,	3	Fall	1
Measles,	2	Mumps,	1
Disease of optic nerve,	2		

The Deaf.

The number of those who reported themselves as deaf (deaf-mutes excluded) is 7,241,—forty-four in every 10,000 of the entire population; or one person deaf in every 228. Obviously, this proportion does not express the exact amount of this disability in Massachusetts; on the one hand, it gives a ratio too large for the number of the totally deaf, while, on the other, it does not represent the whole number of those whose function of hearing is partially lost or indeed seriously impaired. This result arises from the difficulty which belongs to any attempt to discriminate degrees of disability by any standard short of an exact scientific measure.

The following table, giving the distribution of the numbers of the deaf in the several counties, shows that the people of Barnstable County are especially afflicted with this defect, while the inhabitants of Suffolk County are the least subject to it.

Persons reported as Deaf, their number in each County in 1875, and their proportion to the General Population.

COUNTIES.	Deaf.	Population to each Person Deaf.
The State,	7,241	228
Barnstable,	276	116
Berkshire,	365	187
Bristol,	333	394
Dukes,	26	157
Essex,	1,007	222
Franklin,	248	136
Hampden,	434	217
Hampshire,	368	120
Middlesex,	1,320	215
Nantucket,	14	229
Norfolk,	437	202
Plymouth,	384	181
Suffolk,	775	471
Worcester,	1,254	168

Many of the contrasts apparent in the above table would disappear if the same census enumerator gathered the facts for the entire State, or if all persons, census enumerators

included, were endowed with identical faculties of observation, and shaped their judgments by the same measure. It has been the experience of most governments that data of a specific nature, like those of the afflicted classes under consideration, were much more fully returned from rural than from urban populations. This experience is exemplified in the next table, which gives an analysis of the numbers of the deaf reported in each city and in the State at large. By this it appears that only one of the cities, Salem, gives a proportion of deaf persons to population less than that of the State. If we seek an explanation of these contrasts outside of errors and omissions in the enumeration, the chief determining element of the disparity may be found in the greater proportion of young and healthy persons in the cities, or conversely, in the greater relative number of elderly persons in the country, persons more subject to the infirmities of advancing age.

CITIES.	Deaf.	Population to each Person Deaf.
Boston,	677	505
Lowell,	125	398
Worcester,	212	232
Cambridge,	133	359
Fall River,	58	782
Lawrence,	34	1,027
Lynn,	131	249
Springfield,	123	252
Salem,	148	175
New Bedford,	94	272
Ten Cities,	1,735	394
Rest of State,	5,506	176
The State,	7,241	228

With regard to the sex distribution, the number of males reported deaf is 3,733, or one in 213 of the male population; the number of females is 3,508, or one in 244. Here, again, as in the case of the blind, the greater exposure of men impresses itself.

The age distribution of the deaf is exhibited in the following table:—

AGES.	Deaf.	Population.	Proportion: One in—
Under 20 years,	696	651,894	937
20 to 39 (both inclusive),	1,584	551,827	348
40 to 59 " "	2,124	309,253	145
60 to 79 " "	2,131	117,469	55
80 and over,	669	11,167	17

The progressive increase in the proportion of deaf persons in each vicennial period of life, is suggestive of the decay of power and impairment of function which come with advancing years.

The observation illustrated in the last table, that age is an important factor in the matter of deafness in any community, finds further exemplification in an analysis of the assigned causes of the defect. Of the 7,241 persons avowing themselves deprived of hearing, 4,815 give their opinion of the circumstances in which their deprivation occurred. Nearly a fourth of this number (1,067) assign advanced age as the cause of their deafness. Scarlatina is next to old age in the list, 951 cases being charged to the account of this scourge of childhood. Inflammatory action, variously described as otitis, sores in the head, ulcers in the head, abscesses in the ear, catarrh, was the cause of deafness in 878 persons. Fevers of various kinds, typhoid being the chief, are charged with 280 cases. Congenital cases numbered 230, and hereditary cases, 211. Measles are the assigned cause of 216 instances. Among the 283 cases of deafness caused by accidental injury, are 44 which are ascribed to the "discharge of cannon," or to "cannonading"; a number add the clause, "in the army." The "noises of trip-hammers" and other "factory noises," chiefly in boiler-works, founderies and cotton mills, are blamed by 50 persons. Others among the assigned causes are as follows: scrofula (144); neuralgia (48); disease of throat (32); cerebro-spinal meningitis (36); exposure (57); cold bathing and diving (40); erysipelas (30); diphtheria (31); sunstroke (17); whooping-

cough (19); small-pox (15); thunder storms (11); cancer (5). Among the improbable and fanciful causes are: mumps (16); vaccination (4); asthma (2); hay fever (1); cholera (1); chicken-pox (1); fright (1); abuse (1).

The Dumb.

Of this class, comprising presumably those persons who can not talk, but who can hear, and who are otherwise in the possession of unimpaired faculties, 129 were returned.—81 males and 48 females. It is highly probable that a careful inquiry into these 129 cases would result in a very material change in these numbers. Dumbness without deafness is very rare, and when not due to malformation is almost invariably a sign of idiocy; with the exception of a few instances of loss of speech due to anatomical defect, these 129 cases of so-called dumbness may fairly be assigned to idiocy or to deaf-mutism. Some support to our inference, that these statistics of the so-called dumb should be redistributed upon a new classification, is given by the fact that 81 of these cases, nearly two-thirds of the whole number, are under twenty years of age, and 43, or more than one-third the entire number, are under the age of ten years. There is no apparent reason why dumbness should be found in the young so exclusively, and the presumption is that careful investigation would correct such an observation. Seventy-five of the cases are reported as congenital. Very little information is afforded upon the schedules to guide judgment as to the causes of the loss of speech as alleged; one individual is recorded as "born without a tongue"; another was made dumb by shock; another, a Chelsea lad, was rendered permanently speechless by "fits caused by fear of the Pomeroy boy"; and, finally, another attributed his loss of speech to an "overdose of medicine."

The Deaf and Dumb.

According to the returns, the number of deaf-mutes in Massachusetts, in May, 1875, was 654. The census of 1865 ascertained 561 of this class of unfortunates. The enumeration of the deaf and dumb has always been found to be a task of considerable difficulty, but it is noteworthy that the

several enumerations in this State have not been greatly at variance, one with another, when the proportion of deaf-mutes to population is regarded. This proportion in 1875 was one to 2,536; in 1865, it was one in 2,258. There are many good reasons for believing that the census of 1875 is not less accurate than that of ten years ago; if this be granted, we find that the proportion of the deaf and dumb is diminishing. We are certainly more highly favored in this regard than are most of the countries of Europe. The following table, copied from the report on the Irish census of 1861, gives some suggestive statistics upon this point:—

COUNTRIES.	Year of Census.	Deaf and Dumb.	Proportion of Population: One in—
Ireland,	1861	4,930	1,176
England and Wales,	1861	12,227	1,641
France,	1856	21,554	1,671
Belgium,	1856	1,989	2,277
Holland,	1859	1,219	2,714
Hanover,	1861	1,302	1,450
Prussia,	1858	13,297	1,334
Saxony,	1861	1,366	1,629
Bavaria,	1861	2,644	1,774
Wurtemburg,	1861	1,910	901
Denmark,	1860	1,357	1,920
Sweden,	1855	2,678	1,360
Norway,	1855	1,242	1,200

It will be seen that only one of the above-named countries, Holland, shows itself more exempt from the disability of deaf-mutism than Massachusetts. It is possible that more recent enumerations may have changed the above exhibit in some of the countries, but it is scarcely probable that our condition in this State would be found by the latest statistics to be comparatively deplorable. Judging by past experience, we may confidently anticipate progressive improvement in respect to the number of the deaf and dumb. Increasing skill in treating the diseases which cause deaf-dumbness and in preventing them from spreading, and improved methods in teaching the pitiable subjects of the defect, will lessen this unhappy disability.*

* Upon the schedule returned by the Clarke Institution for the deaf and dumb at Northampton, is the suggestive note: "The pupils of this institution are deaf, but none are dumb."

The following table shows the distribution of the deaf and dumb in the several counties :—

Persons reported as Deaf and Dumb, their number in each County in 1875, and their proportion to the General Population.

COUNTIES.	Deaf and Dumb.	Population to each person Deaf and Dumb.
THE STATE,	654	2,536
Barnstable,	19	1,692
Berkshire,	24	2,845
Bristol,	40	3,277
Dukes,	22	185
Essex,	107	2,087
Franklin,	14	2,407
Hampden,	37	2,549
Hampshire,	12	3,735
Middlesex,	104	2,731
Nantucket,	–	–
Norfolk,	41	2,154
Plymouth,	35	1,982
Suffolk,	117	3,119
Worcester,	82	2,564

A noteworthy feature of the foregoing table is the comparative excess of the deaf and dumb in the counties of Barnstable, Dukes and Plymouth. The very high ratio in Dukes is especially remarkable; it is accounted for by the fact that by intermarriage a single family appears to have propagated this condition to an extraordinary extent, twenty of the twenty-two deaf-mutes in Martha's Vineyard bearing the same surname. A similar state of things was ascertained by the enumeration of 1865, when the proportion was one deaf-mute to every 175 of the population.

The sexes share the infirmity of deaf-mutism unequally in Massachusetts, the ratio among the males being one deaf-mute to every 2,219, and that of the females one to every 2,897. The numbers were 358 males and 296 females.

It is of interest and importance to learn the ages of the deaf-mutes in the State, so that we may know how many in the population are likely to become the proper subjects for an institution for the education of this class. The following is an exhibition of the ages of the deaf and dumb as reported :—

AGES.	The Deaf and Dumb.	Population.	Proportion: One in—
Under 5 years, ...	21	173,855	8,279
5 to 9 (both inclusive), . .	80	163,738	2,047
10 to 19 " " . . .	115	314,301	2,733
20 to 29 " " . . .	123	310,861	2,527
30 to 39 " " . . .	105	240,966	2,295
40 to 49 " " . . .	77	182,823	2,374
50 to 59 " " . . .	51	126,430	2,479
60 to 69 " " . . .	54	79,186	1,466
70 to 79 " " . . .	26	38,283	1,472
80 and upwards, ...	2	11,167	5,583

Without doubt the number of the deaf and dumb at ages under five years is understated; a defect, we may remark in passing, that is common to every census enumeration, in Europe or America. The deafness of a child is hardly suspected for several months at least after birth; and parents are usually unwilling to be convinced that their child is actually destined to be a deaf-mute, the hope being entertained that at the worst the ability to talk is delayed only. So, too, if a child, after learning to talk, becomes deaf and then dumb by reason of disease, the parents naturally postpone their conviction that full power of speech is irrevocable. Hence, many children are returned as deaf who are really deaf-mutes, and the small number of the deaf and dumb reported as under five years old indicates that this disability was unrecognized or concealed on the part of the friends of many children whose exact condition would be determined and find a place on census schedules at a later period of life.

The excessive proportion of the deaf and dumb at ages between 60 and 80 is extraordinary and difficult of explanation.

Of the total number of deaf-mutes, 350 (194 males and 156 females) are returned as having been affected from birth. The acquired defect is therefore less than the congenital, cases of the former being to those of the latter as 100 to 110.

Among the principal causes assigned for the cases of the acquired deafness upon which the loss of speech so largely depends, the following may be mentioned:—

Scarlet fever is charged with 112 cases. Is not this a suggestive fact to be considered in connection with efforts for the prevention and limitation of this infectious disease? Of the cases of deaf-dumbness not congenital, scarlet fever is blamed, and probably upon good grounds, for nearly one-third.

Various forms of fever, other than scarlet fever, caused 29 cases.

Falls and other accidents caused injury in 28 cases which resulted in deaf-mutism.

Eighteen cases are ascribed to measles.

Cerebro-spinal meningitis is the alleged cause of 15 cases.

Inflammatory affections of the ear, of a nature not specified, caused loss of speech and hearing in fourteen instances.

Of diseases of the nervous system, we have paralysis (4), hydrocephalus (5), disease of the spine (6); in all, 15 cases.

The less direct and definite causes assigned were scrofula, whooping-cough, convulsions, cholera infantum, and croup.

Small-pox and diphtheria were credited with one case each.

The Idiotic.

The total number of persons described as idiotic or imbecile in the population of Massachusetts is 1,340. Compared with the entire population, this number gives a ratio of one idiot in every 1,232 persons. This ratio is considerably less than that found in England and Wales in 1871 (one in 771), but it exceeds that found according to the census of Massachusetts in 1865 (one in 1,468). The most careful and altogether trustworthy enumeration of the lunatic and idiotic classes in Massachusetts with which we are familiar is that undertaken in 1854 by a commission on lunacy appointed under a legislative resolution. According to the report of this commission,* Dr. Jarvis found as the result of correspondence with the physicians in all parts of the State, and by means of careful research, that the idiotic class was then in the proportion of one in 1,034 of the entire population. This ratio is based upon a much more careful canvass than is likely to occur where the ordinary agencies of the census are employed, and is probably as nearly accurate as is practicable.

* Report on Insanity and Idiocy in Massachusetts by the Commission on Lunacy under Resolve of the Legislature of 1854. Boston. 1855.

Persons are naturally sensitive about giving information concerning the mental deficiencies of their kindred, idiocy being generally regarded as a humiliating infirmity, to be concealed rather than described in detail to official canvassers. Especially would this condition of feeling be found in cities where cases of idiocy are less a matter of common cognizance than in rural communities in which family affairs are kept private with comparative difficulty. But the medical profession, the family physicians of the State, while they appreciate the technical distinction between mental defect or idiocy and mental disease or insanity, are able also to give exact numerical data of the cases which at one time and another come under their charge.

The number of idiots ascertained by the census, approaching as it does the proportion found by Dr. Jarvis twenty years ago, is undoubtedly a close approximation to the exact statistics of idiocy in Massachusetts at the present time. The diminution in the ratio may be explained partially by the increased number of immigrants within our territory, who, in forsaking their homes for a new world, have left behind them as far as might be those of their kindred who would encumber them in the efforts to get a living.

Idiocy is distributed among the counties of Massachusetts as follows:—

The Idiotic in Massachusetts, their number in each County in 1875, and their proportion to the General Population.

COUNTIES.	Idiots.	Proportion of Population: One in—
THE STATE,	1,340	1,232
Barnstable,	63	510
Berkshire,	65	1,050
Bristol,	77	1,703
Dukes,	7	582
Essex,	138	1,618
Franklin,	40	842
Hampden,	85	1,109
Hampshire,	42	1,067
Middlesex,	193	1,472
Nantucket,	3	1,067
Norfolk,	79	1,118
Plymouth,	86	806
Suffolk,	205	1,779
Worcester,	257	818

It will be observed that considerable diversity is shown with regard to idiocy in the several counties; the proportion varies from one in 510 in Barnstable to one in 1,779 in Suffolk. If we omit from the account of Suffolk the 94 inmates of the Massachusetts School for Idiotic and Feeble-Minded Youth (the only public institution of the kind in the State), the ratio for that county would be considerably lessened,—one in 3,287. The excess of idiocy in the country as compared with the city finds most ready explanation in the facts already suggested concerning the migration of people to the centres of population, these centres attracting not only the younger and stronger elements from foreign lands, but the productive and self-sustaining portion of the native stock from our own rural sections.

Idiocy has a very unequal distribution between the two sexes, the male idiots being greatly in excess. In 1875, there were in Massachusetts 835 males and 505 females in this class of unfortunates,—165 of the former to every 100 of the latter. The ratio to population is, among males, one in 951; among females, one in 1,698. This preponderance of idiocy among males has been observed to exist in other countries.

The ages of the idiotic class in Massachusetts are distributed as follows:—

AGES.	Idiotic.	Population.	Proportion: One in—
Under 10 years,	80	337,593	4,220
10 to 19 (both inclusive),	316	314,301	994
20 to 29 " "	253	310,861	1,229
30 to 39 " "	205	240,966	1,175
40 to 49 " "	160	186,823	1,141
50 to 59 " "	128	126,430	988
60 to 69 " "	78	79,186	1,015
70 to 79 " "	47	38,283	814
80 and upwards,	17	11,167	657

Two inferences at once suggest themselves upon a review of the foregoing analysis: the comparatively small proportion of idiots at ages under ten years indicates that a considerable

number of idiotic children are overlooked in the enumeration, the parents of such children very naturally concealing the mental defects of their offspring through inability or unwillingness to recognize such an unhappy condition in those near to them, until the advancing age of the subject of the infirmity renders such concealment difficult; and, secondly, the excess of the proportion at ages over seventy suggests that the mental weakness and imbecility of the decline of life have been erroneously described as idiocy,—the truth being, that idiocy, in the great majority of cases a congenital defect, should diminish in proportion to the population from youth onward. We may fairly conclude, however, that the former of these errors is cancelled by the latter, and that our aggregate number may still be accepted as a true approximation to exactness.

The causes of idiocy have always been an interesting study. Dr. Howe, whose authority in such matters will not be questioned, says with great emphasis: "We regard idiocy as a diseased excrescence of society, as an outward sign of an inward malady. It appears to us certain that the existence of so many idiots in every generation *must* be the consequence of some violation of *natural laws*." * Among the indirect or more immediate causes of mental defect, Dr. Howe mentions the intemperance of parents, self-abuse, intermarriage of relatives, and attempts to produce abortion resulting in permanent injury to the *fœtus in utero*.

In the report upon the census of England and Wales for 1871, the following occurs: "Residence in deep valleys, damp and unwholesome climate, crowded dwellings or other unhealthy conditions, intermarriages among a limited number of families, and more especially where weakness of brain already exists,—these are allowed to be predisposing causes, and as they are obviously within human control, the hope may be entertained that the extent of this affliction may be limited in the future."

The data supplied by the recent census in Massachusetts are too meagre and indefinite to form a basis for satisfactory conclusions with regard to the causes of idiocy in this State,

* Report made to the Legislature of Massachusetts on Idiocy. By S. G. Howe. 1848.

they serve merely as an expression of the popular notion of the matter, and as such alone they are here presented. Of course it is manifest that many of the causes assigned, being post-natal, are erroneous, and that exact investigation would find nearly all cases to be dependent on ante-natal conditions necessarily obscure to ordinary intelligence.

Epilepsy is set down as the cause of 159 cases of idiocy. Fevers of various kinds are charged with 49 cases. In 18 cases, fright of the mother during her pregnancy is the alleged cause. Blows on the head, falls and injury at the time of birth, are assigned as having caused idiocy in 34 cases. Intemperance of the father is given in 11 instances. In 10 cases the parents were cousins. This matter of the close relationship of the parents, as contributing to idiocy as well as to other abnormal peculiarities, mental and physical, is well worthy of careful investigation. Among the less fertile and more remote causes assigned are the following: hydrocephalus (6), rickets (10), harsh treatment in childhood (3), sunstroke (3), measles (3), fright (4), masturbation (2), overdosing (2).

The Insane.

A correct enumeration of the lunatic class in any community is as desirable as it is difficult. It is important to ascertain the exact measure of this special burden upon the State and to determine its relation to pauperism. It is of great consequence, also, to learn whether the burden is increasing; whether the restless activity of our modern modes of life is impressing itself upon the public health in increasing degrees and necessitating the enlargement of the facilities for treating mental disease. But for the reasons mentioned previously, the sensitiveness of people with regard to the mental maladies of their kindred and the unwillingness to report such cases, many instances of insanity of mild or intermittent type inevitably escape mention upon the census schedules. This error of omission applies of course to those cases of lunacy remaining at home, not being violent enough to require treatment in hospital and not yet cast off by their kindred to become a public dependence as pauper lunatics; so that the deficiency, being limited to a special and numer-

ically minor class of these unfortunates, while it should be regarded in any analysis of the statistics of lunacy as affecting the aggregate in some degree, is not of very great magnitude.

As a result of the enumeration in May, 1875, we have a total of 3,637 insane persons in Massachusetts at that time. This is in the proportion of one lunatic in every 454 of the entire population, or 22 to every 10,000. This ratio is in marked excess of that found by census enumeration in some foreign countries. In England and Wales, by the census of 1871, the proportion was one in 574; in Ireland, by the census of 1861, it was one in 821; in France, in 1856, it was one in 1,028; in Sweden, in 1855, it was one in 938. These comparative statistics, while they show that the burden of lunacy is relatively excessive in Massachusetts, serve also to confirm our view that the number of insane reported is a very close approximation to exactness.

The data which we have at hand, and the means for verifying them, are unsatisfactory for the determination of the interesting question whether lunacy is increasing in this State. Every enumeration is admitted to be defective in greater or less measure, but it is difficult, if not impossible, to ascertain the degree of deficiency. The following is a statement of the relation of lunacy to population according to the latest statistics based upon enumeration:—

YEAR.	According to—	Insane.	Proportion of Population: One in—
1854, ...	Lunacy Commission, .	2,632	427
1860, ...	United States Census, .	2,105	585
1865, ...	State Census, . .	2,391	529
1870, ...	United States Census, .	2,662	548
1875,.	State Census, . . .	3,637	454

There is good reason for believing that of the above, the first and the last are the most reliable, and furnish the closest approaches to correctness. If this be granted, it is evident that while the actual number of the insane is increasing, the

relative number, when population is regarded, is not becoming alarmingly greater, as some would have it appear.

Of the 3,637 lunatics in Massachusetts in 1875, 2,272, very nearly two-thirds of the whole number, were inmates of public or private institutions for the insane, distributed as follows:—

State Hospital, Worcester,	488
State Hospital, Taunton,	555
State Hospital, Northampton,	481
State Almshouse, Tewksbury (chronic insane),	334
McLean Asylum, Somerville,	153
Boston Lunatic Hospital,	187
County Receptacle. Ipswich,	61
"Herbert Hall," Worcester,	6
"Shady Lawn," Northampton,	3
"Psychopathic Retreat," Roxbury,	4

The remaining 1,365 persons insane were either cared for at home by their friends, or, as paupers, were dependent on public support in town almshouses and private families.

These 1,365 lunatics, *not in hospitals*, were distributed in the various counties as is shown in the subjoined table:—

COUNTIES.	Insane.	Proportion of Population: One in—
Barnstable,	55	585
Berkshire,	64	1,067
Bristol,	101	1,292
Dukes,	5	814
Essex,	200	1,117
Franklin,	57	591
Hampden,	58	1,626
Hampshire,	39	1,137
Middlesex,	260	1,091
Nantucket,	5	640
Norfolk,	88	1,004
Plymouth,	88	788
Suffolk,	100	3,647
Worcester,	245	856

Here, again, as in other classes of the infirm in the general population, we see the influence of migration in increasing the relative amount of lunacy in the country sections.

In the matter of sex distribution, we find an excess of female lunatics; there were 1,704 males and 1,933 females, or 89 of the former to every 100 of the latter. The proportion in each case to population is: for males, one lunatic in every 466; for females, one in every 443.

The ages of the insane, so far as they are reported, are distributed as shown in the next table:—

AGES.	Insane.	Proportion of Population: One in—
Under 20 years,	96	6,791
20 to 29 (both inclusive),	527	590
30 to 39 " "	740	326
40 to 49 " "	801	228
50 to 59 " "	596	212
60 to 69 " "	462	171
70 and upwards,	342	145

It is a well recognized fact among those skilled in the treatment of mental disease, that the curability of a case depends to a considerable degree upon its recentness, the chronic insane being especially intractable. Among the matters concerning which data were gathered in the census was the duration of the disease in cases of lunacy. As the result of the inquiry, we have information upon this point concerning 3,128 of the 3,637 cases. In these 3,128 instances, the duration of the disease is returned in 144 cases as less than one year; these most recent cases are only 4.6 per cent of the whole number described. Of cases under five years' duration, there were 1,184,—37.8 per cent. The remaining 1,944—62 2 per cent of the whole—are returned as of more than five years' duration.

The supposed causes of the mental alienation are described in a minority—37 per cent—of the cases. The subjoined table presents these causes in their numerical summary, as they were returned from five large hospitals and from the friends of those who were not under hospital treatment:*—

*Returns of the presumed causes of lunacy were not made with reference to the inmates of the Boston Lunatic Hospital; this will account for the omission of that institution from the table.

CAUSES.	Worcester.	Taunton.	Northampton.	Tewksbury.	McLean.	Out of Hospitals.	Total.
Hereditary,	29	20	–	4	5	94	152
Epilepsy,	25	26	33	9	1	34	128
Intemperance,	29	31	24	15	1	27	127
Masturbation,	34	33	–	10	2	12	91
Prolonged illness,	24	23	–	–	5	16	68
Uterine disease,	21	14	1	6	–	15	57
Overwork,	11	10	–	4	23	16	64
Injury to the head,	11	11	5	4	1	47	79
Domestic trouble,	12	3	–	3	2	31	51
Grief,	12	10	–	2	–	25	49
Puerperal,	12	14	–	–	8	15	49
Religious excitement,	9	9	–	2	2	18	40
Disappointed affection,	7	1	–	2	1	29	40
Business trouble,	5	11	–	2	1	24	43
Paralysis,	7	6	1	–	1	22	37
Sunstroke,	5	4	4	2	1	21	37
Overstudy,	4	3	1	–	4	20	32
Old age,	6	11	–	–	–	11	28
Fever (typhoid, scarlet, brain),	6	5	1	1	–	31	44
Anxiety,	2	11	–	–	1	7	21
Fright,	3	2	–	–	–	15	20
Spiritualism,	4	3	–	–	1	4	12
Excesses,	4	–	–	–	8	–	12
Softening of brain,	–	–	–	–	–	8	8
Measles,	1	3	–	–	–	6	10
Disease of brain and spine,	6	–	–	–	–	10	16
Overuse of narcotics,	–	–	–	–	–	6	6
Congenital,	3	–	–	–	2	2	7
Syphilis,	–	1	–	–	3	–	4
Parents cousins,	–	–	–	–	–	3	3
Small-pox,	–	–	–	–	–	2	2
Lightning,	–	–	–	–	–	3	3

PART V.

PAUPERISM AND CRIME.

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PAUPERISM AND CRIME.

In volume I. of the Massachusetts census of 1875, which is specially devoted to the people and social statistics concerning them, a presentation is made, by towns, of the number of paupers and convicts in the State. Owing to the fact that paupers and convicts are congregated in the various charitable and correctional institutions maintained by the Commonwealth, the town or county exhibit has little, if any, practical value or significance. The primary object of the census was to obtain the *number* belonging to the dependent and criminal classes, and the town presentation was the easiest and most obvious. In the presentation referred to, the paupers and convicts were distinguished by sex, and, in addition, a classification by place of birth was given.

The object of this part of the Report is to give fuller particulars concerning paupers and convicts than were comprised in the census volume. These points would have been shown there but for the fact that the information hereinafter given is of such a nature that descriptive text is needed to secure its thorough comprehension, that text, also, being necessarily interwoven with the figures presented.

The statistics which we present relate to the causes of pauperism and nature of crimes for which convicts were imprisoned, and to the place of birth, occupations, conjugal condition, present age and illiteracy, both of paupers and convicts. From their inspection many interesting and valuable truths become manifest, and the propriety of their presentation as statistics of labor can not be questioned. We do not desire to trench upon the particular duties of any other

department, but the facts presented point so clearly to certain conclusions relative to the education, both intellectual and industrial, of the pauper and criminal classes, that we deem a brief discussion of the statistics peculiarly appropriate in this Report. In a state in which labor had all its rights there would be, of course, little pauperism and little crime; on the other hand, the undue subjection of the laboring man must tend to make paupers and criminals, and entail a financial burden upon wealth, which it would have been easier to prevent than to endure.

Leaving further consideration of the facts arrived at until after their presentation, we now pass to the special statistics relating to—

Pauperism.

We first present a table, which shows the whole number of paupers, with the designation of sex:—

Number and Sex of Paupers.

COUNTIES.	Males.	Females.	Totals.
The State,	2,388	1,954	4,342
Barnstable,	65	70	135
Berkshire,	77	56	133
Bristol,	155	136	291
Dukes,	8	11	19
Essex,	206	185	391
Franklin,	57	52	109
Hampden,	370	197	567
Hampshire,	22	36	58
Middlesex,	639	645	1,284
Nantucket,	21	17	38
Norfolk,	77	57	134
Plymouth,	159	120	279
Suffolk,	339	156	495
Worcester,	193	216	409

These figures, it should be stated at the outset, represent only those receiving *full* support on the census day, May 1, 1875. The number may have been more or less a week before, or more or less a week after the day mentioned. The secretary of the board of state charities, in his report for 1876 (see page 89), gives the number receiving full support any

part of the year, as 7,749, and the average number fully supported, as 4,977. The preceding figures are given simply as an indication of approximation. Between the returns of the census for a given day, and the careful averages of the board of state charities, based on a year's statistics, there can obviously be no complete or satisfactory comparison, and in dealing with both paupers and convicts we shall confine ourselves to the census figures.

We have already stated that the town or county exhibit of pauperism should not be made the basis of credit or derogation. The location of large charitable institutions in certain towns, gives them and the county in which they are situated, an undue and unjust prominence. For instance, Monson in Hampden County, Tewksbury in Middlesex, and Boston in Suffolk, were the designated residences of 1,846 paupers out of a total of 4,342.

A classification of paupers by place of birth is subjoined:—

Birthplaces of Paupers.

PLACE OF BIRTH.	Males.	Females.	Total.
In town where now pauper,	892	691	1,583
In other towns in Massachusetts,	646	443	1,089
Maine,	46	32	78
New Hampshire,	46	45	91
Vermont,	26	22	48
Rhode Island,	20	23	43
Connecticut,	13	18	31
New York,	35	20	55
New Jersey,	1	–	1
Pennsylvania,	5	1	6
Maryland,	3	1	4
District of Columbia,	2	1	3
Virginia,	6	4	10
North Carolina,	1	2	3
South Carolina,	3	2	5
Louisiana,	2	–	2
Mississippi,	1	–	1
Tennessee,	–	1	1
Ohio,	2	–	2
Kentucky,	1	–	1
Illinois,	3	1	4
Michigan,	1	–	1
California,	1	–	1
Canada,	31	21	52
Nova Scotia,	14	15	29
New Brunswick,	11	12	23

Birthplaces of Paupers—Concluded.

PLACE OF BIRTH.	Males.	Females.	Total.
Cape Breton,	1	1	2
Newfoundland,	1	1	2
West Indies,	7	2	9
South America,	1	–	1
England,	52	48	100
Ireland,	421	480	901
Scotland,	16	11	27
Wales,	–	1	1
France,	1	–	1
Germany,	20	9	29
Holland,	–	1	1
Belgium,	1	–	1
Italy,	3	1	4
Spain,	1	–	1
Norway,	2	–	2
Sweden,	2	3	5
Portugal,	1	2	3
Austria,	–	2	2
Bavaria,	–	1	1
Switzerland,	–	1	1
Malta,	–	1	1
Africa,	2	–	2
India,	1	–	1
New Zealand,	1	–	1
Unknown,	42	34	76
Totals,	2,388	1,954	4,342

The commonly expressed and received opinion that our pauper class is almost entirely composed of persons of foreign birth receives no support from these statistics. Out of 4,342, the whole number, 1,583 were born in the very towns in the State in which they are now paupers, and 1,089 were born in other towns in Massachusetts. The number born in the State, 2,672, is 61+ per cent of the whole number of paupers. If we add those born in other States of the Union (391), we find of American births, 3,063, or 70+ per cent. It will be said that we take no account of parent nativity; that many of those born in this country had foreign born parents. We can not see that this affects the matter greatly. The fact remains that we supply more full support paupers from among our native born population than we receive from foreign born residents. It will also be urged that no account is taken of those temporarily relieved by the State or town, or by private charitable societies. There is no reliable data bearing upon

either of these points, but, from the report of the chief of police of Boston, dated January 8, 1877, we find that of 63,726 "lodgers" at the station houses during the past year, 22,044, or 34+ per cent were born in the United States. We have no doubt that the foreign born residents are more dependent on public and private charity than the native born, but we do not believe that the preponderance against them is so large as has been claimed and tacitly allowed. Some expressive comparisons and percentages relating to this subject are given in the conclusion of this article.

Pauperism is a disease of the body politic, and being so, no statistics concerning it can be more interesting and valuable than those which show the causes for requiring public or private charity. We present the following table in which the "causes" are given, as returned by the individual, but little condensation having been made. The sexes are designated and a classification by age made:—

Causes of Pauperism.

	Under 10.		10 to 15.		Above 15.		Totals.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	
Abuse,	–	–	–	–	1	–	1	–	1
Bad company,	–	–	–	–	1	–	1	–	1
Bad conduct,	–	–	–	–	2	6	2	6	8
Bereavement,	–	–	–	–	–	3	–	3	3
Convict father,	2	2	–	–	–	–	2	2	4
Convict mother,	3	1	–	–	–	–	3	1	4
Cruelty of parents,	–	–	–	–	1	–	1	–	1
Death of husband,	–	–	–	–	–	8	–	8	8
Dependency,	2	1	–	–	–	3	2	4	6
Desertion,	1	2	–	–	–	7	1	9	10
Desertion of children,	–	–	–	–	–	1	–	1	1
Desertion of father,	6	5	5	–	4	–	15	5	20
Desertion of husband,	–	–	–	1	–	9	–	10	10
Desertion of parents,	5	–	3	1	–	1	8	2	10
Disappointment,	–	–	–	–	1	1	1	1	2
Discharged prisoners,	–	–	–	–	9	3	9	3	12
Family trouble,	–	–	–	–	2	1	2	1	3
Fatherless,	2	3	5	2	2	2	9	7	16
Father a pauper,	6	–	3	2	2	–	11	2	13
Friendless,	–	–	–	–	–	4	–	4	4
Grandmother a pauper,	–	2	–	–	–	–	–	2	2
Hereditary,	–	–	–	–	2	–	2	–	2
Idiocy,	4	2	3	7	158	132	165	141	306
Ignorance and loss of head of family,	1	–	–	–	2	2	3	2	5
Illegitimacy,	9	5	2	1	–	9	11	15	26
Immorality,	–	–	–	–	1	6	1	6	7
Infancy,	1	2	–	–	–	–	1	2	3
Infirmity,	–	–	–	–	12	9	12	9	21
Injury,	–	–	–	–	6	2	6	2	8
Insanity,	1	1	1	–	213	452	215	453	668
Insanity of father,	–	–	–	–	–	1	–	1	1
Insanity of mother,	–	–	–	2	–	–	–	2	2
Intemperance,	–	3	–	–	362	108	362	111	473

Causes of Pauperism—Concluded.

	Under 10.		10 to 15.		Above 15.		Totals.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	
Intemperance of husband,	–	–	–	–	–	18	–	18	18
Intemperance of father,	11	10	8	3	4	4	23	17	40
Intemperance of mother,	–	1	–	–	–	–	–	1	1
Intemperance of parents,	25	11	7	5	3	1	35	17	52
Large family, bad management,	–	–	–	–	5	2	5	2	7
Loss of property, and business trouble,	–	1	–	1	10	5	10	7	17
Mental infirmity,	–	–	–	1	26	43	26	44	70
Mental infirmity of parents,	–	–	1	–	–	–	1	–	1
Misconduct of parents,	1	–	–	–	–	–	1	–	1
Mismanagement,	–	–	–	–	12	12	12	12	24
Motherless,	3	2	2	–	–	–	5	2	7
Mother a pauper,	51	52	4	–	–	1	55	53	108
Neglect,	–	–	1	–	–	1	1	1	2
Neglect of father,	–	–	1	–	–	–	1	–	1
Neglect of parents,	1	–	1	–	–	–	2	–	2
No home,	–	–	–	–	–	1	–	1	1
Not given,	168	182	226	98	256	9	650	289	939
Old age,	–	–	–	–	119	154	119	154	273
Orphan,	14	13	10	12	1	2	25	27	52
Parents paupers,	13	23	5	3	1	5	19	31	50
Physical infirmity,	11	11	6	5	354	264	371	280	651
Physical infirmity of husband,	–	–	–	–	–	1	–	1	1
Poverty,	6	5	4	–	18	41	28	46	74
Shiftlessness,	–	–	–	–	27	7	27	7	34
Shiftlessness of husband,	–	–	–	–	–	2	–	2	2
Shiftlessness of parents,	1	5	2	3	–	2	3	10	13
Shiftlessness of father,	–	2	–	–	–	–	–	2	2
Sickness, disease,	–	1	1	–	102	88	103	89	192
Sickness of father,	6	4	1	–	–	–	7	4	11
Sickness of husband,	–	–	–	–	–	5	–	5	5
Sickness of parents,	5	2	–	1	–	–	5	3	8
Sickness of child,	–	–	–	–	–	1	–	1	1
Spent all his money,	–	–	–	–	1	–	1	–	1
Spiritualism,	–	–	–	–	–	1	–	1	1
Unable to work,	–	–	–	–	5	8	5	8	13
Want of employment,	–	–	–	–	1	2	1	2	3
War,	–	–	–	–	1	1	1	1	2
Wife of convict,	–	–	–	–	–	1	–	1	1
	359	354	302	148	1,727	1,452	2,388	1,954	4,342

It is to be regretted that 939, or 21+ per cent, failed to give the cause, but the returns of 3,403, or 78+ per cent, can be relied on. If from these returns we eliminate those suffering from mental or physical infirmity, we find that the idiotic number 306; the insane, 668; the physically infirm, 775; the aged, 273; the sick, 192, making a total of 2,214. These persons are undoubtedly unable to work, and are legitimate objects of public or private charity. Of the remaining number, 1,189, who give the causes, 584 attribute their pauperism, directly or indirectly, to intemperance. Deducting the intemperate, 584, from 1,189, we have left 605, of which number 422 give the actions of others as cause, and, of course, deem their state of pauperism as a circum-

stance beyond their control. This leaves but 183, besides the intemperate, who are, presumably, responsible for their present condition and likely to make an exertion to better it; but, of this number, 32 are under 15 years of age. These figures would seem to indicate that intemperance is the great and "unsatisfactory" cause of pauperism, while the great majority give what may be called "satisfactory" causes. Summarizing the previously given figures, we find the following condensed causes of pauperism:—

Idiotic, insane, infirm, aged and sick, . .	2,214, or 51 per ct.
Intemperance, directly or indirectly, . .	584, or 13+ per ct.
Actions of others, not personally responsible,	454, or 10+ per ct.
Poverty, bad management, shiftlessness, etc.,	151, or 3+ per ct.
Causes not given for	939, or 21+ per ct.

It will be noticed in the table which gives the classification by ages, that of the whole number of paupers considered, 1,163, or 26+ per cent, were children under fifteen years of age.

The "special instruction" sheet which was sent out as a guide to the proper filling out of the census family schedule, contained the following: "The occupations of paupers, before they became such, should be given." In the succeeding tables we present the results of the tabulation of occupations.

Occupations of Male Paupers.

Agents, ...	3	Cigar makers, . . .	2
Bakers, ...	4	Clergyman, ...	1
Barbers, ...	4	Clerks, ...	3
Basket makers, . . .	2	Cobblers, ...	3
Blacksmiths, ...	11	Comb maker, . . .	1
Boot crimper, . . .	1	Cooks, ...	2
Brass worker, . . .	1	Coopers, ...	7
Broom makers, . . .	2	Copper worker, . . .	1
Butchers, ...	5	Curriers, ...	7
Cabinet makers, . . .	10	Cutter, ...	1
Carpenters, ...	28	Dentist, ...	1
Carriage painters, . .	2	Druggist, ...	1
Chair cane seaters, . .	5	Engineer, ...	1
Chaser	1	Engraver, copper-plate, .	1

Occupations of Male Paupers—Concluded.

Factory operatives,	10	Pedler, fish,	1
Farmers,	117	Physician,	1
Fishermen,	12	Pilot,	1
Forgeman,	1	Plumbers,	2
Founderyman,	1	Printers,	8
Fruit dealer,	1	Pump maker,	1
Furrier,	1	Quarrymen,	2
Gambler,	1	Rigger,	1
Gardeners,	6	Rope makers,	5
Gentleman,	1	Roofer,	1
Glass cutter,	1	Salesmen,	3
Glass workers,	3	Saloon keeper,	1
Grocer,	1	Saw-mill operative,	1
Hackman,	1	Servants,	3
Harness makers,	3	" 10 to 15 years of age,	2
Hatters,	4	Ship captains,	2
Herb doctor,	1	Ship carpenter,	1
Hostlers,	3	Shoe-factory operative,	1
Innkeeper,	1	Shoe heeler,	1
Iron worker,	1	Shoemakers,	67
Jewellers,	3	Silk printer,	1
Jobber,	1	Silversmith,	1
Junk dealers,	2	Soap maker,	1
Laborers,	305	Soldier,	1
Last maker,	1	Stevedore,	1
Liquor seller,	1	Stone workers,	10
Lithograph pressman,	1	Students,	2
Lumberman,	1	Sugar refiner,	1
Machinists,	6	Tailors,	6
Manufacturers,	2	Teacher,	1
Marble rubber,	1	Teamsters,	7
Mariners,	39	Tinsmith,	1
Masons,	10	Tobacconists,	2
Masons, stone,	5	Traders,	2
Mast and spar maker,	1	Upholsterer,	1
Merchants,	10	Wagon maker,	1
Mill overseer,	1	Waiter,	1
Miner,	1	Wheelwrights,	3
Morocco dresser,	1	Wood sawyers,	2
Musician,	1	Wood workers,	2
Nailers,	3	Woollen dyer,	1
Painters,	2	Not given,	887
Painters and glaziers,	2	" " under 10 yrs. of age,	359
Paper hanger,	1	" " 10 to 15 " "	300
Pedlers,	7		

Occupations of Female Paupers.

Artificial flower maker,	1	Rope spinner,	1
Chair cane seaters,	4	Seamstresses,	8
Companion,	1	Servants,	211
Cooks,	3	" 10 to 15 years of age,	2
Dressmakers,	6	Shoe binder,	1
Factory operatives,	31	" under 10 yrs. of age,	1
Housekeepers,	27	Tailoresses,	4
Housewives,	224	Teachers,	3
Housework,	80	Trader,	1
Ladies,	4	Washerwomen,	5
Laundresses,	9	Wire worker,	1
Milliner,	1	Not given,	808
Nurses,	9	" " under 10 yrs. of age,	353
Nurserymaids,	9	" " 10 to 15 yrs. of age,	146

Of the 1,727 male paupers (we exclude the 661 male children), we find that 887, or 51+ per cent, do not state that they had any trade, profession or occupation before they became paupers. Of the 1,452 female paupers (we exclude the 502 female children), it is shown that 808, or 54+ per cent, did not return the names of the occupations by which they had formerly tried to support themselves. That one-half of the adult paupers considered were without any industrial preparation to gain a livelihood, can not be authoritatively stated, for undoubtedly many paupers were not personally inquired of, some failed to answer, and the idiotic and insane, of course, made no returns.

The figures show the impartiality of poverty, for nearly every branch of labor is represented; showing, at least, that no particular avocation is the direct road to the almshouse. Among the male paupers, the 28. carpenters, 117 farmers (including, no doubt, farm laborers), 305 laborers, 39 mariners and 67 shoemakers are the most noticeable in point of number. Among the females, the 31 factory operatives, the 331 engaged in housekeeping or housework, and the 213 servants are especially prominent.

The adult paupers numbered 3,179; of these, 1,695 returned no occupation. If from this 1,695 we deduct 974, the number of insane and idiotic, we find that but 721 adults,

or 22+ per cent of the adults, failed to specify their occupation. The presentation given may, therefore, we think, be accepted as an indicative statement, so far as it goes.

From the tabulation of conjugal condition, several interesting points are learned.

Conjugal Condition of Paupers.

CONJUGAL CONDITION.	Males.	Females.	Total.
Single,	1,526	1,138	2,664
Married,	366	344	710
Widowed,	367	459	826
Divorced,	14	9	23
Unknown,	115	4	119
Totals,	2,388	1,954	4,342

If we deduct the children of both sexes from the number of single and from the total number, we arrive at the following percentages: Of the male adult paupers, 51+ per cent are single, 21+ per cent married, and 21+ per cent are widowers.

Among the female adult paupers, 43+ per cent are single, 23+ per cent married, and 31+ per cent are widows. Considering the adults of both sexes together, 46+ per cent are single and 49 per cent are or have been married. The impartiality of poverty is again attested.

We next present a table showing the ages of paupers at the time of taking the census, May 1, 1875:—

Ages of Paupers.

MONTHS.	Males.	Females.	MONTHS AND YEARS.	Males.	Females.
1 month,	4	1	7 months,	2	–
2 months,	3	6	8 "	1	1
3 "	4	4	9 "	3	3
4 "	5	6	1 year,	44	47
5 "	–	3	2 years,	38	32
6 "	–	1	3 "	29	22

Ages of Paupers—Concluded.

Years.	Males.	Females.	Years.	Males.	Females.
4 years,	28	29	54 years,	27	5
5 "	39	30	55 "	34	18
6 "	34	46	56 "	30	14
7 "	35	38	57 "	32	18
8 "	41	40	58 "	18	12
9 "	49	45	59 "	22	13
10 "	50	30	60 "	54	35
11 "	58	31	61 "	25	15
12 "	54	19	62 "	38	27
13 "	58	27	63 "	24	26
14 "	58	28	64 "	23	15
15 "	24	13	65 "	52	32
16 "	21	26	66 "	24	17
17 "	23	13	67 "	32	18
18 "	12	5	68 "	33	16
19 "	10	8	69 "	29	24
20 "	9	16	70 "	42	56
21 "	19	10	71 "	36	24
22 "	15	18	72 "	28	33
23 "	14	16	73 "	44	24
24 "	11	9	74 "	34	23
25 "	20	11	75 "	66	26
26 "	12	7	76 "	32	12
27 "	14	9	77 "	29	23
28 "	14	15	78 "	33	17
29 "	11	18	79 "	24	18
30 "	17	45	80 "	27	31
31 "	11	17	81 "	16	18
32 "	15	18	82 "	12	20
33 "	28	20	83 "	9	12
34 "	19	9	84 "	14	10
35 "	32	37	85 "	11	7
36 "	22	22	86 "	10	13
37 "	14	11	87 "	8	6
38 "	19	28	88 "	8	10
39 "	16	14	89 "	5	8
40 "	34	47	90 "	5	7
41 "	9	18	91 "	3	3
42 "	22	26	92 "	4	2
43 "	19	6	93 "	1	2
44 "	20	20	94 "	1	3
45 "	32	34	95 "	–	3
46 "	20	18	96 "	1	–
47 "	16	17	97 "	–	1
48 "	23	16	98 "	1	1
49 "	14	19	100 "	1	1
50 "	39	34	107 "	–	1
51 "	22	16	Unknown,	20	22
52 "	13	18			
53 "	22	19	Totals,	2,388	1,954

Adopting the arbitrary division used in the age presentation in the census, and calling those 15 and under and those over 60, the naturally *dependent class*, we arrive at the following statement:—

PERIODS OF AGE.	MALES.		FEMALES.		TOTALS.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
15 years and under,	661	27+	502	25+	1,163	27
Above 15, to and including 60,	920	38+	825	42+	1,745	40+
Above 60 years,	787	33+	605	31+	1,392	32+
Totals,	2,368	–	1,932	–	4,300	–

The "unknown" are dropped in the above table. Combining the percentages of the naturally dependent classes, we find that 60+ per cent of the males and 56+ per cent of the females were either under or over the working or productive age. Of both sexes, 59+ per cent were of a non-supporting age. The burden of pauperism seems lessened when we see but 40 per cent of the full support paupers are of a working age, and reflect that among them will be found the due proportion of insane, idiotic, sick and infirm.

Among the paupers who had arrived at an advanced age, we find the following: *Males.*—A native of Medford, aged 96; one born in Weston, aged 100; and one born in Sheffield, 98 years of age. *Females.*—One born on ship coming from England, aged 98; one born in Ireland, aged 107; a native of Greenfield, aged 97; and one of Freetown with age given as 100 years.

The want of a proper occupation is undoubtedly the forerunner of pauperism, and an important cause of it. The want of an education has a significant influence, as may be seen from the subjoined table:—

Illiteracy of Paupers.

PLACE OF BIRTH.	10 TO 15 YRS. (both inc.)		ABOVE 15 YRS.		Total Illiterates.	Can not Read.	Can not Write.	Can neither Read nor Write.
	Males.	Females.	Males.	Females.				
Born in town named, . .	4	18	127	140	289	–	61	228
Born in other towns in Mass.,	4	7	105	99	215	–	106	109
Born in other States, . .	2	3	25	38	68	–	31	37
Born in England, . . .	–	–	6	19	25	–	16	9
Born in Ireland, . . .	1	5	112	251	369	–	111	258
Born in other for'n countries,	–	1	32	38	71	–	30	41
Totals, ...	11	34	407	585	1,037	–	355	682

Those who can read but can not write amount to 34+ per cent of the whole number of illiterates, and the balance, 65+ per cent, are wholly uneducated. Of the male illiterates, 116 can read but can not write, and 302 can neither read nor write. Of the female illiterates, 239 can read but can not write, and 380 can neither read nor write.

Considering the whole number of paupers, less all children under ten, and the idiotic and insane paupers above ten, we secure the following tabular result:—

SEX AND AGE.	Number of Sane Paupers.	Number of Illiterates.	Percentage of Illiterates.
Males above 10, ...	1,654	418	25+
Females above 10, ...	1,009	619	61+
Totals, ...	2,663	1,037	38+

The preponderance of illiteracy among the females is remarkable. The general result is that a little over one-third of the sane paupers, above ten years of age, are illiterate.

Comparing the native and foreign born paupers with the native and foreign born illiterates, we obtain the subjoined statement:—

PLACE OF BIRTH.	Number of Paupers. (All ages.)	Number of Illiterates.	Percentages of all Ages.	Percentages of those above 10. (Estimated.)
Native born, . . .	3,063	572	18+	30+
Foreign born, . . .	1,279	465	36+	59+

If we confine our attention to those born in Massachusetts, we find that out of 2,672 paupers, 504 are illiterate, 337 being wholly uneducated.

A more particular investigation into the place of birth of these Massachusetts born paupers discloses the town and city responsibility. In making the table which follows, the children under 10 years of age, and the idiotic and insane have been excluded. The number shown for each town indicates those persons of proper age (above 10 years) and free from mental infirmity, who were born in the towns named, and having grown up in ignorance, are now paupers in the towns in which they were born:—

Illiterate Paupers now Dependent in Towns in which they were Born.

CITIES AND TOWNS.	Males.	Females.	CITIES AND TOWNS.	Males.	Females.
BARNSTABLE CO.,	16	11	BRISTOL CO.—*Con.*		
Chatham, . . .	2	–	Freetown, . .	2	4
Eastham, . . .	–	1	Mansfield, . .	3	2
Falmouth, . .	1	1	Rehoboth, . .	2	4
Harwich, . . .	7	3	Somerset, . .	–	1
Orleans, . . .	1	1	Swansea, . . .	–	1
Provincetown, . .	–	1	Westport, . . .	–	5
Sandwich, . .	4	3			
Truro, . . .	1	1	DUKES CO., . .	1	–
			Chilmark, . .	1	–
BERKSHIRE CO., .	4	10			
Adams, . . .	–	3	ESSEX CO., . .	10	19
Becket, . . .	–	1	Amesbury, . .	–	1
Cheshire, . . .	–	1	Andover, . . .	1	–
Lenox, . . .	2	1	Boxford, . . .	–	1
Otis, ...	1	–	Lawrence, . .	1	–
Savoy, . . .	–	2	Marblehead, . .	2	11
Sheffield, . . .	1	2	Newbury, . .	1	–
			Peabody, . . .	3	5
BRISTOL CO., .	10	18	Rockport, . .	1	1
Easton, . . .	3	–	West Newbury, .	1	–
Fall River, . .	–	1			

Illiterate Paupers, Etc.—Concluded.

Cities and Towns.	Males.	Females.	Cities and Towns.	Males.	Females.
Franklin Co.,	7	4	Nantucket Co.,	–	2
Colrain,	2	–	Nantucket,	–	2
Conway,	2	–			
Erving,	–	1	Norfolk Co.,	1	4
Gill,	–	1	Quincy,	–	1
Greenfield,	–	1	Randolph,	1	1
Leyden,	1	–	Weymouth,	–	2
Orange,	1	1			
Shutesbury,	1	–	Plymouth Co.,	11	4
Hampden Co.,	7	15	Brockton,	1	–
Agawam,	–	4	Middleborough,	2	–
Blandford,	1	–	Pembroke,	3	1
Brimfield,	2	–	Plymouth,	1	3
Chester,	1	–	Wareham,	4	–
Holland,	–	1			
Holyoke,	1	–	Suffolk Co.,	–	30
Longmeadow,	1	–	Boston,	–	30
Springfield,	–	2			
Westfield,	–	5	Worcester Co.,	14	17
West Springfield,	1	1	Ashburnham,	2	1
Wilbraham,	–	2	Auburn,	1	–
Hampshire Co.,	1	8	Barre,	1	1
Amherst,	–	1	Charlton,	1	–
Belchertown,	–	4	Dana,	–	2
Hadley,	1	2	Gardner,	–	1
Prescott,	–	1	Hubbardston,	–	1
Middlesex Co.,	12	6	Leominster,	–	2
Bedford,	1	–	Lunenburg,	1	1
Cambridge,	4	2	Mendon,	1	–
Chelmsford,	–	1	Milford,	1	–
Concord,	2	–	Northborough,	–	1
Hopkinton,	1	–	Petersham,	1	1
Lowell,	1	–	Princeton,	1	1
Melrose,	–	1	Southborough,	1	–
Tyngsborough,	1	–	Sutton,	1	2
Watertown,	2	1	Webster,	2	1
Wilmington,	–	1	Winchendon,	–	1
			Worcester,	–	1

Recapitulation.

Counties.	Males.	Females.	Total.	Counties.	Males.	Females.	Total.
Barnstable,	16	11	27	Middlesex,	12	6	18
Berkshire,	4	10	14	Nantucket,	–	2	2
Bristol,	10	18	28	Norfolk,	1	4	5
Dukes,	1	–	1	Plymouth,	11	4	15
Essex,	10	19	29	Suffolk,	–	30	30
Franklin,	7	4	11	Worcester,	14	17	31
Hampden,	7	15	22				
Hampshire,	1	8	9	Totals,	94	148	242

The exhibit is surely not a gratifying one. Pauperism, in itself, is an evil. If a town allows its children to grow up in ignorance, and afterwards become a burden upon it, the evil is magnified. With our school facilities such an exhibit should have been impossible.

We have considered the number of paupers, the causes of dependency, and the place of birth, occupation, conjugal condition, present age and illiteracy of the dependent. We defer further remarks upon the information and lessons conveyed by the figures, until after we have made a similar presentation concerning the convict class.

Crime.

The following table gives the whole number of convicts who were returned as being in confinement on May 1, 1875, the number of each sex being shown:—

Number and Sex of Convicts.

COUNTIES.	Males.	Females.	Total.
The State,	3,578	762	4,340
Barnstable,	2	1	3
Berkshire,	64	6	70
Bristol,	175	47	222
Essex,	296	39	335
Hampden,	113	7	120
Middlesex,	291	39	330
Norfolk,	74	8	82
Plymouth,	167	214	381
Suffolk,	1,850	385	2,235
Worcester,	546	16	562

As stated in relation to paupers, this number of convicts, 4,340, is the statement for May 1, 1875, only. The county distribution of criminals is no more significant than that of paupers. The location of correctional institutions in certain towns and cities necessarily adds the criminal element to their enumeration of population.

Following the routine adopted in the case of paupers, we present a table showing the classification of convicts by place of birth:—

Birthplaces of Convicts.

PLACE OF BIRTH.	Males.	Fem.	Total.	PLACE OF BIRTH.	Males.	Fem.	Total.
In town where now convict,	706	78	784	Canada,	61	20	81
In other towns in Mass.,	902	96	998	Nova Scotia,	57	23	80
Maine,	129	39	168	New Brunswick,	47	20	67
New Hampshire,	58	16	74	Cape Breton,	2	–	2
Vermont,	20	8	28	Newfoundland,	6	3	9
Rhode Island,	38	7	45	Mexico,	1	–	1
Connecticut,	38	4	42	West Indies,	13	–	13
New York,	145	17	162	South America,	2	–	2
New Jersey,	15	1	16	England,	169	51	220
Pennsylvania,	30	2	32	Ireland,	731	309	1,040
Maryland,	12	3	15	Scotland,	47	20	68
District of Columbia,	7	1	8	Wales,	5	1	6
Virginia,	48	8	56	France,	4	–	4
North Carolina,	4	1	5	Germany,	24	3	27
South Carolina,	6	–	6	Denmark,	4	–	4
Louisiana,	4	1	5	Holland,	2	–	2
Georgia,	1	–	1	Italy,	7	–	7
Mississippi,	1	–	1	Spain,	2	–	2
Missouri,	3	–	3	Norway,	1	–	1
Minnesota,	1	–	1	Sweden,	7	7	14
Indiana,	1	1	2	Portugal,	2	–	2
Alabama,	1	–	1	Switzerland,	2	–	2
Florida,	1	–	1	Finland,	1	–	1
Texas,	3	–	3	Malta,	1	–	1
Ohio,	7	1	8	Africa,	1	1	2
Kentucky,	8	–	8	Australia,	2	–	2
Illinois,	8	–	8	Unknown,	178	20	198
Michigan,	2	–	2	Totals,	3,578	762	4,340

Examining this table, we find that 784 were born in the towns in the State in which they are now undergoing sentence, and that 998 are natives of other towns in Massachusetts. The state born, 1,782, form 41+ per cent of the whole number of convicts. If we include those born in other States of the Union, 701, we ascertain that 2,483 are American born, or 57+ per cent of the whole number. As in the case of paupers, we can take no account of parent nativity; nor can we say that an examination of arrests and commitments for the whole State would either sustain or change the given percentages. The report of the chief of police of the city of Boston for the year 1876 shows that of the whole number (30,041) arrested, 11,690, or 38+ per cent, were native born. In the closing part of this article we present some significant percentages which show the ratio of native and foreign born convicts to the native and foreign born population.

If pauperism is a disease of society, crime is a plague. If

a knowledge of the causes of pauperism is of service in preventing its spread, a statement of the causes of imprisonment of convicts, showing the prevalence of certain forms of crime, must also be of value. In the following table the "nature of crime" is given, as nearly as possible, in the language of the schedules, the sexes being numerically presented and a classification by age included:—

Causes of Imprisonment.

	Under 10.		10 to 15.		Above 15.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Adultery,	–	–	–	–	45	18	45	18	63
Arson and setting fires,	–	–	2	–	33	3	35	3	38
Assault,	–	–	–	–	86	3	86	3	89
Assault and battery,	–	–	7	–	172	9	179	9	188
Assault, felonious,	–	–	–	–	39	1	39	1	40
Assault, indecent,	–	–	–	–	6	–	6	–	6
Assault on an officer,	–	–	–	–	12	–	12	–	12
Attempt to break and enter,	–	–	–	–	10	–	10	–	10
Attempt to commit murder,	–	–	–	–	–	1	–	1	1
Attempt to commit rape,	–	–	–	–	30	–	30	–	30
Attempt to commit larceny,	–	–	2	–	12	–	14	–	14
Attempt to pick pocket,	–	–	–	–	2	–	2	–	2
Attempt to rob,	–	–	–	–	2	1	2	1	3
Bastardy,	–	–	–	–	4	–	4	–	4
Bigamy,	–	–	–	–	2	–	2	–	2
Breaking and entering,	2	–	13	–	97	2	112	2	114
Breaking and entering, and larceny,	–	–	6	–	312	–	318	–	318
Burglary,	–	–	–	–	47	–	47	–	47
Burglary with intent to kill,	–	–	–	–	1	–	1	–	1
Carrying concealed weapons,	–	–	–	–	1	–	1	–	1
Circulating obscene papers,	–	–	–	–	2	–	2	–	2
Common railers and brawlers,	–	–	–	–	–	2	–	2	2
Counterfeiting coin,	–	–	–	–	2	–	2	–	2
Cruelty to animals,	–	–	–	–	2	–	2	–	2
Debt,	–	–	–	–	2	–	2	–	2
Disorderly,	–	–	–	–	2	–	2	–	2
Disobedience,	–	–	2	–	5	–	7	–	7
Disturbing a public school,	–	–	–	–	1	–	1	–	1
Disturbing the peace,	–	–	–	–	16	2	16	2	18
Drunkenness,	–	–	2	–	648	241	650	241	891
Embezzlement,	–	–	–	–	16	3	16	3	19
Escaped convicts,	–	–	–	–	3	–	3	–	3
Evading car fare,	–	–	–	–	3	–	3	–	3
Fast driving,	–	–	–	–	2	–	2	–	2
Forgery,	–	–	–	–	47	–	47	–	47
Fornication,	–	–	–	–	6	8	6	8	14
Fraud,	–	–	1	–	39	–	40	–	40
Furnishing liquor to prisoners,	–	–	–	–	1	1	1	1	2
Having burglars' tools,	–	–	–	–	1	–	1	–	1
Having counterfeit money,	–	–	–	–	1	–	1	–	1
Housebreaking,	–	–	–	–	1	–	1	–	1
Idleness,	–	–	–	–	25	14	25	14	39

Causes of Imprisonment—Concluded.

	Under 10.		10 to 15.		Above 15.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Idle and disorderly,	–	–	–	–	75	100	75	100	175
Incest,	–	–	–	–	6	–	6	–	6
Indecent exposure,	–	–	–	–	4	–	4	–	4
Keeping a gaming house,	–	–	–	–	2	–	2	–	2
Keeping a house of ill-fame,	–	–	–	–	6	2	6	2	8
Keeping a noisy and disorderly house,	–	–	–	–	3	5	3	5	8
Larceny,	5	–	110	–	738	76	853	76	929
Lewd and lascivious persons,	–	–	–	–	19	7	19	7	26
Liquor nuisance,	–	–	–	–	13	2	13	2	15
Maiming,	–	–	–	–	2	–	2	–	2
Malicious mischief,	–	–	4	–	23	3	27	3	30
Manslaughter,	–	–	1	–	48	–	49	–	49
Murder,	–	–	–	–	21	3	21	3	24
Neglect of family,	–	–	–	–	1	–	1	–	1
Night walking,	–	–	–	–	–	57	–	57	57
Not given,	–	–	–	–	113	119	113	119	232
Obstructing railroad track,	–	–	1	–	3	–	4	–	4
Passing counterfeit money,	–	–	–	–	3	–	3	–	3
Perjury,	–	–	–	–	5	–	5	–	5
Prize fighting,	–	–	–	–	1	–	1	–	1
Procuring abortion,	–	–	–	–	3	–	3	–	3
Profanity,	–	–	–	–	1	–	1	–	1
Polygamy,	–	–	–	–	5	3	5	3	8
Rape,	–	–	–	–	16	–	16	–	16
Receiving stolen goods,	–	–	1	–	20	7	21	7	28
Rescuing a prisoner,	–	–	–	–	3	3	3	3	6
Robbery,	–	–	–	–	123	2	123	2	125
Runaways,	–	–	–	–	1	–	1	–	1
Sodomy,	–	–	–	–	3	–	3	–	3
Stealing a ride,	–	–	–	–	4	–	4	–	4
Stubbornness,	–	–	12	–	38	1	50	1	51
Stubbornness and disobedience,	–	–	18	–	9	4	27	4	31
Threatening bodily harm,	–	–	–	–	4	1	4	1	5
Transferred from State Primary School,	–	–	2	–	–	–	2	–	2
Truancy,	7	–	95	3	5	–	107	3	110
Vagrancy,	5	1	63	4	137	50	205	55	260
Violation of city ordinance,	–	–	–	–	3	–	3	–	3
Violation of license law,	–	–	–	–	17	–	17	–	17
Violation of Sunday law,	–	–	–	–	1	–	1	–	1
Totals,	19	1	342	7	3,217	754	3,578	762	4,340

But 232, or 5+ per cent, failed to give the causes of imprisonment, and the presentation may be regarded as a complete one in this respect. Upon examining the crimes specified we find that assault (335), breaking and entering, including burglary (479), drunkenness (891), larceny (929), robbery (125), and truancy and vagrancy (370), represent 3,129 crimes, or 72+ per cent of the whole number. If

we analyze the crimes as returned, omitting the 232 "not given," we secure the following condensed statement of causes of imprisonment:—

Crimes against the person, . . 476, or 11+ per cent.
Crimes against property, . . 1,771, or 43+ per cent.
Violations of law and order, . . 1,861, or 45+ per cent.

The children under 15 number 369, or 8+ per cent of the whole number.

In the subjoined table will be found the classification of the occupations of convicts before incarceration, as called for by the special instruction sheet previously referred to:—

Occupations of Male Convicts.

Actor,	1	Curriers,	5
Artist,	1	Dresser,	1
Bakers,	11	Dyers,	3
Barbers,	24	Engineers,	5
Bartenders,	3	Engineer, civil,	1
Blacksmiths,	16	Engraver,	1
Bleacher and presser,	1	Factory laborers,	2
Boiler makers,	3	Factory operatives,	43
Bookbinders,	3	Farmers,	30
Book-keepers,	2	Firemen,	4
Boot and shoe makers,	115	Fishermen,	7
Brakemen,	3	Furniture dealer,	1
Brass worker,	1	Gardeners,	4
Bricklayers,	3	Gas fitters,	2
Brush makers,	4	Glass blower,	1
Butchers,	3	Glass worker,	1
Cabinet makers,	7	Gunsmith,	1
Calico printer,	1	Hackman,	1
Calker,	1	Hairdresser,	1
Carpenters,	30	Harness makers,	3
Carriage maker,	1	Hatters,	3
Carriage painters,	4	Horse shoer,	1
Carvers,	7	Hostlers,	11
Chair makers,	3	Hotel keeper,	1
Chair cane seaters,	235	Huckster,	1
" " 10 to 15 yrs. of age,	89	Iron puddlers,	2
Cigar makers,	2	Iron worker,	1
Clerks,	2	Jewellers,	4
Collier,	1	Junk dealer,	1
Comb maker,	1	Laborers,	220
Cooks,	4	Lather,	1
Core makers,	2	Lawyer,	1

Occupations of Male Convicts—Concluded.

Liquor sellers,	4	Shoe fitter,	1
Machinists,	27	Silversmith,	1
Mariners,	19	Skate maker,	1
Masons,	10	Slaters,	4
Masons, stone,	3	Soap makers,	2
Merchants,	2	Soapstone worker,	1
Miner,	1	Steam fitters,	2
Morocco dresser,	1	Stone cutters,	7
Moulders,	15	Tailors,	3
Moulder, stereotype,	1	Teamsters,	12
Painters,	39	Telegraphist,	1
Paper hanger,	1	Tinplate workers,	3
Pattern finisher,	1	Tinsmiths,	9
Paving cutter,	1	Trader,	1
Pedlers,	5	Trunk makers,	2
Physicians,	3	Turner,	1
Plasterers,	5	Upholsterers,	4
Plumber,	1	Varnishers and polishers,	4
Porter,	1	Waiters,	5
Printers,	3	Watchman,	1
Pugilist,	1	Whitesmith,	1
Railroad workman,	1	Whitewasher,	1
Sailmakers,	3	Wood sawyer,	1
Salesman,	1	Wood turners,	2
Saloon keepers,	5	Wood worker,	1
Scene painter,	1	Not given,	2,131
Shoe dresser,	1	" " under 15 yrs. of age,	272

Occupations of Female Convicts.

Cooks,	2	Nurses,	4
Factory operatives,	21	Sewing-machine operators,	8
Housekeepers,	13	Seamstresses,	10
Housewives,	21	Servants,	74
Housework,	2	Not given,	580
Laundresses,	18	" " under 15 yrs. of age,	8
Liquor seller,	1		

The result of the above tabulation is far from being satisfactory. Out of a total of 4,340, those returning no occupation number 2,991, or 68+ per cent. This is, to some extent, the result of defective or careless enumeration. In one case, at least, that of 324 male chair cane seaters, the *present* occupation was returned instead of that followed previous to incarceration The great variety of professions and trades represented in the list of occupations shows, as in the case of

paupers, that no particular branch of labor supplies a noticeable proportion of criminals.

The succeeding presentation of the conjugal condition of convicts is vitiated in value by the great proportion of "unknown." This deficiency, and others in the previous presentations, was caused by the real or professed inability of the heads of several large institutions to supply the information, they not having complete records, and it being considered prejudicial to discipline, and well nigh impossible, for the enumerator to gain the information by personal inquiry of each pauper and convict. Could this have been done, the returns would undoubtedly have been complete and of great value.

Conjugal Condition of Convicts.

CONJUGAL CONDITION.	Males.	Females.	Total.
Single,	1,895	332	2,227
Married,	621	356	977
Widowed,	8	19	27
Divorced,	2	–	2
Unknown,	1,052	55	1,107
Totals,	3,578	762	4,340

In the case of the females, the married show a very slight excess over the single. Undoubtedly the greatest number of male convicts are single.

We now present a companion table to that given for paupers, showing the ages of convicts at the time the census was taken,—May 1, 1875.

Ages of Convicts.

AGE.	Males.	Females.	AGE.	Males.	Females.
8 years,	1	–	13 years,	70	18
9 "	16	–	14 "	81	1
10 "	33	1	15 "	58	1
11 "	49	2	16 "	127	14
12 "	53	2	17 "	133	10

Ages of Convicts—Concluded.

AGE.	Males.	Females.	AGE.	Males.	Females.
18 years, . .	178	23	50 years, . .	46	13
19 " . .	187	29	51 " . .	12	-
20 " . .	154	34	52 " . .	12	4
21 " . .	186	32	53 " . .	18	2
22 " . .	174	27	54 " . .	7	1
23 " . .	142	26	55 " . .	17	8
24 " . .	133	27	56 " . .	12	2
25 " . .	117	29	57 " . .	5	3
26 " . .	106	28	58 " . .	9	2
27 " . .	84	34	59 " . .	7	2
28 " . .	105	32	60 " . .	26	6
29 " . .	90	29	61 " . .	3	1
30 " . .	102	36	62 " . .	3	1
31 " . .	73	19	63 " . .	6	-
32 " . .	94	23	64 " . .	10	1
33 " . .	72	25	65 " . .	9	-
34 " . .	68	16	66 " . .	4	2
35 " . .	99	46	67 " . .	5	2
36 " . .	82	13	68 " . .	3	-
37 " . .	62	17	69 " . .	1	-
38 " . .	44	15	70 " . .	8	1
39 " . .	48	13	71 " . .	1	-
40 " . .	76	33	72 " . .	-	-
41 " . .	38	5	73 " . .	1	-
42 " . .	33	15	74 " . .	-	1
43 " . .	28	10	75 " . .	4	-
44 " . .	18	5	76 " . .	-	-
45 " . .	52	1	77 " . .	-	-
46 " . .	21	6	78 " . .	-	1
47 " . .	18	4	Unknown, .	3	1
48 " . .	27	4			
49 " . .	14	3	Totals, . .	3,578	762

If we consolidate the ages given by periods, we obtain the following presentation :—

PERIODS OF AGE.	MALES.		FEMALES.		TOTAL.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
15 years and under, . .	361	10+	8	1+	369	8+
16 to 21, both inclusive, .	965	27+	142	18+	1,107	25+
22 to 40, both inclusive, .	1,771	49+	488	64+	2,259	51+
41 to 60, both inclusive, .	420	11+	113	14+	533	12+
Above 60 years, . . .	58	1+	10	1+	68	2+
Totals, ...	3,575	-	761	-	4,336	-

The "unknown," only 4 in number, are omitted from the above. It will be remarked that 33+ per cent of the convict class are 21 years of age or under. More than one-half the criminals are between 22 and 40 years of age. In considering this question, we must take into account the fact that many have been in prison for a length of time and were younger when sentenced. This circumstance would necessarily increase the number of those 21 or under, and make more apparent the prevalence of crime among minors. This exhibition of juvenile delinquency naturally leads us to the consideration of the want of education among convicts. The *status* of those in prison, May 1, 1875, as regards illiteracy, is shown in the following table:—

Illiteracy of Convicts.

PLACE OF BIRTH.	Above 15 Years.		Total Illiterates.	Can not Read.	Can not Write.	Can neither Read nor Write.
	Males.	Females.				
Born in town named,	23	7	30	–	4	26
in other towns in Mass.,	50	4	54	–	24	30
in other States,	66	19	85	–	12	73
in England,	21	13	34	–	5	29.
in Ireland,	141	75	216	–	27	189
in other foreign countries,	35	10	45	–	7	38
Totals,	336	128	464		79	385

No children under 15 were reported as being unable to read and write. Those able to read, but unable to write, form 17+ per cent of the whole number of illiterates, and those unable to either read or write 82+ per cent. Of the male illiterate convicts, 64 can read but can not write, and 272 can neither read nor write. Of the female illiterates, 15 can read but can not write, and 113 can neither read nor write.

Considering the whole number of convicts, less the children under 15, of which none were returned as illiterate, we arrive at the amount of illiteracy in the convict class.

SEX AND AGE.	Number of Convicts.	Number of Illiterates.	Percentage of Illiterates.
Males above 15, ...	3,217	336	10+
Females above 15, ...	754	128	16+
Totals, ...	3,971	464	11+

The general result, as drawn from the above, is that a little over one-tenth of the convicts above 15 years are illiterate.

If we compare the native and foreign born with the native and foreign born illiterates, the result is as follows:—

PLACE OF BIRTH.	Number of Convicts. (All Ages).	Number of Illiterates.	Percentages of all ages.	Percentages of those above 15. (Estimated.)
Native born, . . .	2,483	169	6+	7+
Foreign born, . . .	1,857	295	15+	17+

Out of 1,782 convicts born in Massachusetts, 84 are illiterate, 56 being wholly uneducated.

Remarks.

It is proper for us to state, by way of preface to our contemplated general remarks concerning the previously presented statistics, that the only object of this article is to give information upon certain points which are not obtainable through other channels.

The annual reports of the board of state charities, and of the prison commissioners, contain the full and official figures relating to the population, cost of support, etc., of our charitable and correctional institutions. The social statistics which we present in relation to their inmates are supplementary, not comparative. The information gained gives an earnest of what could be learned by a system of complete registry. We desire to acknowledge here the constant and satisfactory use we have made, in the preparation of this article, of the various reports of the board of state charities

and of the prison commissioners. Gov. Rice, in his inaugural address delivered January 4, 1877, thus succinctly stated the work of these two branches of the government:—

"Of the revenues annually expended by the Commonwealth (after deducting one-fifth, which goes to pay interest on the public debt and the charges thence accruing), it will be found that nearly a quarter part is paid in public charity or for the execution of the penal laws and the maintenance of prisons. Few persons are aware of the full extent of this department of the state government, or of the manifold interests which it includes and provides for. Massachusetts supports asylums for the blind, the insane, the deaf-mute, the idiotic, the inebriate; schools for the young of these classes, for paupers and for juvenile delinquents; prisons of three or four grades; hospitals for most maladies; almshouses, public and private, and charitable societies of every kind. We have two distinct systems of public relief for the poor: one administered by the State in six or seven establishments, containing hundreds of inmates, the other administered by three hundred and forty-two cities and towns, in two hundred and twenty almshouses, and in thousands of private families where the poor are supported or aided. The aggregate outlay for public and private charity is very large, amounting to *four and a half millions* of dollars paid during the year 1876. Less than a third part of this amount is paid from the state treasury; but something more than a third part is paid by the cities and towns, and over all the public expenditure the State authorities exercise some supervision."

Having thus shown the scope of other branches of the government and defined the nature and object of the information which we have gathered, we shall proceed to consider these social statistics of paupers and convicts in a general way.

The Number of Paupers and Convicts.

As previously stated, the number of paupers considered in the tables was the number receiving full support on the first of May, 1875. This class of paupers is variable, being naturally larger in winter than in summer. The board of state charities failed to obtain perfectly reliable figures relating to "partial support" for 1876, the officers reporting to it being

forced to rely upon estimates in many cases. It gives the grand aggregate of all classes reported as having been supported or relieved within the year, by town, city or state officers, as 283,476. This number is divided into full support, 7,749; partial support, 65,988; Boston lodgers, 60,803; and vagrants and travellers, or "tramps," 148,936. Making allowances for undoubted duplications, the secretary of the board says, "Probably not more than 80,000 or 85,000 different persons are represented in the grand aggregate of all classes." Comparing 4,342, the number of full support paupers, with 1,651,912, the population of the State, we find the proportion to be one in 380 of the population. Of the whole number, 4,342, the children 15 years of age and under number 27 per cent. By the census of England and Wales, for 1871, the number of full support paupers was found to be 156,430, or one in 153 of the population. The children numbered 33 per cent. The above indicates about two and one-half full support paupers in England and Wales to one in Massachusetts. Taking the number, 85,000, as indicating the whole number of persons in the State receiving aid for any length of time, we ascertain the proportion to be, one such in every 19 of the population. By the census of England and Wales, the corresponding number was found to be 1,037,360, or one in every 23 of the population. The number of full support paupers in Massachusetts has been steadily increasing since 1861, as shown in the report of the secretary of the board of state charities for 1876. On the other hand, the figures for England and Wales for the years 1861 and 1871, show a slight proportional decrease, one in 160 as compared with one in 153, in favor of the latter year.

We are prone to bewail the condition of the English laborer and lament the existence of pauperism in England, but the official figures, certainly, do not warrant much self-gratulation. It may be that English private benefactions far exceed our own in amount, but the fact remains that the English government aids fewer paupers, proportionately to population, than our own. The number of vagrants, or tramps, has increased largely in the State in the past few years. In 1873, the cases of relief of vagrants numbered 45,653; in 1874, 98,263; in 1875, 137,308; and in 1876, 148,936. These figures, of

course, do not represent so many *different* persons; one active tramp, no doubt, manages to be relieved and reckoned a great many times in the course of a year, by travelling from one town to another and seeking aid in all. Of the number in 1876, 63,000 were lodgers at the Boston police station houses, 51,000 being non-residents of the city. Only beds for the night, in warm rooms, were supplied to these travellers, the chief of police of the city of Boston stating that only 94 pints of soup, as food, were supplied to the whole number. Where they did obtain their food still remains a mystery.

The number of convicts, 4,340, undergoing imprisonment on the census day, May 1, 1875, supplies a proportion of one convict in 380 of the population, being the same ratio as in the case of paupers. By the census of England and Wales for 1871, the number of convicts incarcerated was found to be 28,756, or one in 790 of the population. This indicates two and one-tenth convicts in Massachusetts to one in England and Wales. These figures furnish food for reflection; but the nominal character of the offences for which a great many of our convicts are incarcerated should be borne in mind, for many crimes in Massachusetts are simply misdemeanors in England. The number of commitments to the prisons of Massachusetts for 1876 amounted to 16,700 *different persons*. This shows a criminal class with a representation of one in 98 of the population. The "Judicial Statistics" of England and Wales for 1872, stated that the convicts in prison numbered 30,913 and the *suspected* criminal class, at large, 46,877, a total of 77,790, or one in 291 of the population.

The following table shows the relative number of female paupers and convicts in this State and in England and Wales:

CLASSIFICATION.	Males.	Females.	Totals.
Massachusetts "full support" paupers,	2,388	1,954	4,342
England and Wales "full support" paupers, ...	79,968	68,323	148,291
Massachusetts convicts in prison .	3,578	762	4,340
England and Wales convicts in prison,	23,475	5,281	28,756

In Massachusetts, 31+ per cent of both paupers and convicts are females; in England and Wales, 41+ per cent.

Place of Birth of Paupers and Convicts.

We have seen, previously, that of the full support paupers 70+ per cent, and of the convicts 57 per cent, were American born. We included as "Americans" all persons born in this country. We can not see how the fact of a native born child having a foreign born father or mother, or both, can render that child other than an American citizen. From a comparison between the paupers and convicts born in various places, and the whole number of the population born in the same places, we derive the following interesting tables:—

Paupers.

PLACE OF BIRTH.	Population.	No. of Paupers.	Proportion: One in—
Born in Massachusetts,	973,011	2,672	364
Born in other States,	252,818	391	646
American born (total),	1,225,829	3,063	400
Born in Ireland,	234,556	901	260
Born in England,	49,139	100	491
Foreign born (total),	418,904	1,203	348

Convicts.

PLACE OF BIRTH.	Population.	No. of Convicts.	Proportion: One in—
Born in Massachusetts,	973,011	1,782	546
Born in other States,	252,818	701	360
American born (total),	1,225,829	2,483	453
Born in Ireland,	234,556	1,040	225
Born in England,	49,139	220	223
Foreign born (total),	418,904	1,659	252

The truth stands out plainly in these tables. Those born in other States supply the smallest quota of paupers; and those born in Massachusetts, of convicts. The foreign born furnish one pauper to 348, and the American born one to 400; a slight variation in favor of the native born. As regards crime, the foreign born supply one convict in 252, and the

American born one in 453; a showing decidedly in favor of the native born. In connection with this presentation, the following from the report of the board of state charities for 1876 is pertinent:—

"Frequent allusion has been made by the officers of the board, in previous reports, to the great expense incurred by Massachusetts for the support of lunatics and paupers belonging to neighboring States and the British Provinces. This, in their judgment, equals the annual cost of at least one public institution; it has forced upon Massachusetts the otherwise needless construction of a fourth lunatic hospital, and has already compelled our tax-payers to assume the annual payment, in interest alone, of $100,000; while the yearly expenditure for partial relief and full support can hardly fall short of $60,000. Our own laws in regard to the removal of strangers, could they be thoroughly executed, are sufficient to relieve us of this yearly burden of support; but we have at once to encounter the adverse legislation of adjoining States which impose severe penalties upon all who assist in returning to their homes and places of legal settlement therein, citizens of those very States who may have fallen into distress without their borders."

The Boston chief of police, in his report for 1877, does not distinguish the inhabitants of other States. Out of 63,726 "lodgers," 22,099 were American born, 3,022 were born in the British Provinces, 456 in Canada, 29,589 in Ireland, 4,916 in England, and 1,836 in Scotland. The whole number of foreigners was 41,627. In a total of 30,041 arrests, 11,690 were American born, 1,047 were born in the British Provinces, 103 in Canada, 14,578 in Ireland, 1,068 in England, and 312 in Scotland. The foreigners numbered 18,351. About two-thirds of the arrests resulted in commitments for trial.

In connection with our present subject, the question of immigration demands a passing notice. In 1876, 8,118 immigrants arrived at the port of Boston. From May 10, 1848, to October 1, 1876, the total arrivals numbered 458,637. Of this number, Ireland furnished 227,982, England, 87,308, the British Provinces, 72,572, Scotland, 10,192, and Wales, 2,135; a total of 400,189, or about eight-ninths of the whole

number. The non-productive class among these immigrants numbered more than 100,000, or one to every three and one-half workers; a heavy burden to support in a new country, and undoubtedly often the cause for asking private and public aid.

Causes of Pauperism and Imprisonment.

By a reference to page 191, it will be seen that of the full support paupers the majority are sick, afflicted with blindness, deafness, insanity, etc., or have been made paupers by acts of others. The intemperate paupers show the need of practical reform work. With this exception, the full support paupers seem to be a helpless class, whose condition of dependency is unpreventable, and for whom the State or individuals must provide. There are no statistics relating to those who make requests for partial support; nor is there any means of telling how many of the army of tramps are workingmen out of employment, and how many are self-inclined vagabonds. If the "pauper disfranchisement" bill should become a law, its execution, with a system of registry, might settle these points by separating the deserving laborer from the undeserving shirk—the real "tramp."

The officers in charge of the charitable institutions seem to have weeded the ground carefully and thoroughly, and the number of able-bodied paupers receiving full support must be inconsiderable. The situation here is not dissimilar to that in England in 1871. The introduction to the census of England and Wales for 1871 says, "The only prospect of any material reduction of the burden of pauperism would seem to arise out of the possibility of diminishing the number of adult able-bodied paupers (indoor and outdoor) in receipt of relief." If we in Massachusetts have diminished the number of able-bodied paupers to a minimum, and are doing everything possible to remove the children from the pauper institutions, and make them self-supporting, we are doing the best that can be done, and must bear the remaining burden with equanimity, it being a necessary infliction. Whether the intemperate pauper must be considered a necessity, the work of temperance reform must decide. The contemplation of the number so incapacitated for self-support, and the conse-

quent public burden they have become, form a strong argument in favor of both suasion and prohibition.

The causes of imprisonment are fully set forth on page 204. The crimes against the person form 11+ per cent, against property 43+ per cent, and against law and order, 45+ per cent. Other statistics tend to confirm this showing. The state detective force in 1876 made 530 arrests. Of these, 52 were for offences against the person, 300 against property, and 178 against law and order. The Boston police made 30,041 arrests in 1876. Those for crimes against the person numbered 3,228, against property, 3,015, and against law and order, 23,798, the latter number being 79+ per cent of the whole number. The following selection, made from the report of E. H. Savage, chief of police of Boston, does much to explain the large number of arrests in that city; and the argument therein contained has, undoubtedly, an application throughout the State:—

"THE CATALOGUE OF CRIME.

"In turning to the catalogue of crime as presented in this report, the first item that meets the eye is 'Arrests, 30,041.' Thirty thousand persons arrested in Boston in one short year! To him who looks on the dark side of human life this is a sad showing, and he will be likely to turn away with the remark, "Truly the world in general is growing bad, very bad, and Boston in particular is a very wicked city.' Indeed, some very good and learned people, starting from this point, seem to have convinced themselves that for vice and crime Boston is without a parallel.

"If we pursue the inquiry further in relation to the nature of crime committed, as set forth in the catalogue, we find that more than two-thirds of the number of arrests are included in four offences called misdemeanors; viz., drunkenness, simple assaults, disorderly and suspicious persons, and that less than one-fifteenth of the crimes charged are of a nature called felonious. I say charged, because when a person is taken into custody for crime, it is the duty of the officer making the arrest to record the same, and make complaint against the prisoner for the highest crime of which there is reasonable evidence to prove him or her guilty; but

the court before whom the case is investigated may find the party guilty of a less offence, and render such verdict as the trial may justify; but in no case can a verdict be rendered of a higher crime than the one charged: for instance, a person may be charged with murder; a coroner's inquest and a grand jury may find a true bill, and at the subsequent trial he may possibly be found guilty of murder; but the verdict is more likely to be manslaughter, felonious assault, simple assault, or justifiable homicide; or he may be set at liberty without trial, some one else having confessed the crime; but, in either case, the charge on the record of the arresting officer must stand as first made; and similar cases often occur in all classes of crimes and misdemeanors for which arrests are required to be made. This, with the large number of arrests for violation of the city ordinances, for insanity and delirium tremens, and for other causes that cannot properly be classed as misdemeanors, together with those in custody as deserters, runaways, detained witnesses, etc., will reduce not only the magnitude of crimes charged, but also the number of criminals, very essentially from what may at first view appear in the catalogue; and if it may prove that the police of Boston reap their field a little closer, or that the press spread their 'locals' a little broader than in other cities, it should not be taken as evidence that our people are more wicked."

The Boston statistics are so complete and instructive that the need of similar exactness in State records becomes self-evident.

The arrests for drunkenness in Boston in 1874 numbered 11,880; in 1875 they decreased to 10,325; and in 1876 they fell to 8,564. The average amount of property stolen yearly, from 1870 to 1876 inclusive, amounted to only $\frac{1}{36}$ of 1 per cent of the average valuation of personal property, and the greater part of it was recovered.

Occupations of Paupers and Convicts.

The question of occupations, in the case of both paupers and convicts, is a twofold one. The occupations of paupers before they become such, and of convicts before incarceration, form one side; their occupation while in the almshouses or prisons, the other. It can not be claimed that any very desir-

able working material can be found among our paupers and convicts. If we except the large number that are unable to work, we shall, by no means, find workers remaining. We shall find some with trades, able and ready to work, but the greater number unpossessed of a self-supporting occupation, and many unwilling to work. We believe that the unfitness for productive labor, whether it springs from lack of a trade or occupation, or from personal antipathy to work, is a great and predisposing cause of both pauperism and crime. This is not the place for a homily on the dignity of labor; but the fact is, no man is realizing his capacity of enjoyment unless he has some congenial occupation, which should also support him. All can not arrive at that happy state, for the drudgery of life must be done by some; but it is pure selfishness which sets apart any class of men to such labor. We all know that our young men have a great indisposition to physical labor, for the pick and the shovel, the spade and the hoe savor of derogation. We believe in that kind of compulsory education that will fit a man for work and self-support. The right of the State to compel a man to train his eye so that he can read and his hand so he can write, will not be seriously questioned, and we hope will soon be seriously insisted upon. The State, then, surely has a right to compel a man to so train both eye and hand that he can support himself and others, and free the State from the burden of his support unless in exceptional and well understood cases.

The true claim of an able-bodied man upon a community is not for support, but for a chance to support himself; and if one community will not or can not furnish him this, he should try another. No able-bodied pauper should be supported in idleness while so many waste places are waiting cultivation. The English colonization societies furnish free passes only to desirable colonists; that is, men and women who know how to work and mean to work. What opening then for the tradeless pauper or convict unless he is taught how to work, and the necessity shown?

We have already stated that the able-bodied paupers supported by public charity are doubtless very few in number, and of those partially supported the workers have not been separated from the drones. The warden of the state prison

says, in his last report, that of 220 men sentenced during 1876, 147 were without a trade or any regular means of earning a living. Will those men serve their time and be discharged in their present unfit state to battle with the world? They may go out into society again resolved to do right, but without a reliable means of support they are ill-prepared to meet the adversities of hard times, or the temptation to gain by crime what they do not know how to obtain by honest labor.

Conjugal Condition and Ages of Paupers and Convicts.

We have remarked the nearly equal division of paupers into married and single, and have considered their ages in reference to productive labor. We repeat, that the full support paupers of the State are nearly a helpless burden. The criminals are mainly single, and 84 per cent of them are under 40 years of age. The conjugal condition of paupers and convicts was not separately reported in the English census. Of the full support paupers in England and Wales, on the census day in 1871, 48,228 were under 15 years of age; between 15 and 40 years, 28,747; between 40 and 70, 44,462; above 70 years, 26,854; 501 were returned as aged 90 and upwards, and 21 were said to be centenarians. These figures supply some comparisons with those given for Massachusetts. The ages of criminals were not given separately. The Registrar General speaks of the prison statistics being "necessarily meagre." He continues: "But the evils and burdens inflicted upon society by the criminal classes are so great that no labor would be ill-bestowed in the collection of full and accurate information respecting them, as the basis of measures calculated to thin their ranks, whether by improved penal and reformatory discipline or by preventive agencies."

He further says, speaking of the annual volumes of "Judicial Statistics," that an examination of the tables shows "a falling off in the class of habitual criminals, and a diminution of offenders under 20 years of age, indicating the success of the measures taken to rescue and intercept those who would otherwise be the recruits of the ranks of crime." The necessity of a complete registry, in connection with other points, of the conjugal condition and ages of Massachusetts paupers and convicts would seem to be as urgent here as in England.

Illiteracy of Paupers and Convicts.

We have seen that 38 per cent of our full support paupers and 11 per cent of our convicts are illiterate. For this state of affairs there is but one remedy — education, and that *compulsory education*. This alone will remove one "cause" of pauperism and crime, and oblige the illiterate pauper and convict to improve his condition in this respect. The criminals are much better educated than the paupers. They need to be, to be successful in crime. Of the 220 convicts sent to the Charlestown State Prison in 1876, only 21 were unable to read and write; yet 147 were without a trade. No stronger testimony in favor of compulsory education could be cited than the fact that 242 persons were born in Massachusetts, grew up unable to read or write, and are now paupers in the towns where they were born. It seems like retributive justice that the burden has fallen in the proper place, and that those towns which failed to make citizens have made first-rate paupers.

Cost of Pauperism and Crime.

The census of England and Wales, for 1871, gives the amount expended in relief to the poor in the year ending Lady Day (March 25), 1871, as £7,886,724 or at the rate of 6*s*. 11¼*d*. per head of the population. This would be about $1.75 currency, of our money.

The amount spent in 1876, by towns, cities and this State, for charitable purposes, was $1,631,011, or 98 cents per head of the population. The amount spent for the *care* alone of criminals, was $1,000,000, or 60 cents per head. This sum, $2,631,011, was about one-tenth of the whole amount raised by taxation. About one-fifth, or $5,000,000, was spent for the support of schools. The sum given as expended for purposes of charity, reform or correction was only the public outlay. Individual benefactions can not even be estimated. The interest on the value of pauper establishments is not included, neither are the cost of prisons, interest on value of same, outlay for police (Boston spends $850,000 yearly on its police force), cost of judiciary, etc., taken account of. The pauper establishments, with their helpless inmates, are nearly a clear out-

lay. The prisons cost $575,000 to run them in 1876, and convict labor brought $141,000, or less than one-fourth of the cost of food, clothing and attendance. The average weekly cost of a convict, in 1876, was $2.07. His labor in the state prison will bring the State from 40 to 90 cents per day. In Hampden County, convict labor has been secured by contract, for slipper making, at *three cents* per day. The exact burden placed indirectly upon the laboring man by the necessary taxation for the support and care of paupers and convicts can not be definitely stated.

The efforts of society at large, as regards pauperism and crime, must be directed, of course, in such a way as to secure a decrease in the number of both paupers and convicts. When men and women have become inmates of almshouses or prisons, then the authorities have to deal with them as a fact. Measures of prevention have failed, and measures of relief, correction and reform become necessary. There can be no doubt that education is the best weapon with which to fight both pauperism, in all its forms, and crime. But it is not simply education of the mind that will work the cure. The "gospel of work" must be taught as well, and no pauper or convict is fitted to leave the care of the State until he is able to work and secure a living. A workingman who labors and pays his way, though he be unable to read or write, is a better member of society than those mentally educated individuals who will not work, or those who do not know how to earn their living. What society fails to do in the way of book or work education for paupers and convicts should be made up by the authorities when the individuals come under their control. As bearing upon this subject, we quote the following opinions expressed in a late number of "Harper's Weekly":—

"There are two important bills pending in the Legislature of New York, the principles of which are of general application. One bill provides for the indefinite sentences of criminals convicted of offences punishable by imprisonment in the state reformatory, and the other provides for the custody and reformatory treatment of vagrants. Prison discipline and pauperism are subjects upon which the progress of civilization throws immense light. They are susceptible of the most careful scientific observation and treatment; and no sign of the times is

more encouraging than the comprehensive study which is devoted to them by intelligent and capable persons. The first step in reformation of any kind is the awakening of self-respect. And in the criminal classes nothing tends to this more surely than the perception of the offender that he is not regarded as a wild beast, but that there are human hope and sympathy even for him. But the science of prison discipline, so to speak, and of the treatment of pauperism, is far from sentimental in the hackneyed sense of that recently abused word. It often seems, on the contrary, to be hard and stern. Thus it totally prohibits street almsgiving, or any giving whatever, without careful inquiry.

"The principle of the prison bill which we have mentioned is that of imprisonment dependent upon good behavior. The courts sentencing offenders to the state reformatory at Elmira shall not 'fix upon, state, determine or limit the duration' of the punishment. The managers may send to the state prison any prisoner who was more than thirty years old at the time of his conviction, or who has been previously convicted of crime, and any incorrigible prisoner whose presence is seriously hurtful to the others. The object of the imprisonment is to prevent the prisoners from committing crime, to secure their self-support and to accomplish their reformation. The managers are to establish a system of marks, under which every prisoner is to be credited with good conduct of all kinds and charged for all offences and negligences; and they are to release any prisoner when they are satisfied that there is a strong or reasonable probability that his release will not be incompatible with the welfare of society. The managers may also permit prisoners to go out upon parole under suitable rules, the managers still retaining custody and supervision. This is a plan which has been adopted in England and Ireland and with great success. It is obviously most reasonable, and it is approved by those who have carefully studied the subject.

"The other bill provides substantially that tramps or vagrants shall support themselves and reduce their numbers. In every judicial district, except the first, a board of seven managers, to be appointed by the governor, and with no salary but their actual necessary expenses while engaged in their duties, are to hire proper buildings and lands suitable for the

employment of vagrants, and under all circumstances the sexes are to be rigorously separated. No vagrant is hereafter to be committed to any poorhouse, jail or other place of confinement save these district buildings, except by the written request of the attorney of the county. This bill thus provides a system of workhouses, and will unquestionably steadily diminish the volume of tramps that is pouring through the State. Vagrancy is incipient criminality. It has increased alarmingly within three or four years. And unless vigorous and intelligent measures are adopted, pauperism will become a hereditary curse upon our soil. The details of such a bill are, of course, to be carefully guarded, and they seem to us to be so.

"The objection that district workhouses will add to the public expenses is well answered by practical and experienced students of the subject of pauperism, both men and women, the managers of the state charities' aid association, whose opinion upon such a subject may well be regarded as conclusive. They show the mistake of the supposition that the bill proposes increased expense; for it provides for the transfer of vagrants from the county jails, where they spend their time in idleness and a school of crime, to a workhouse, where they will be compelled to support themselves. The counties will thus be relieved of the maintenance of thousands of the idle and vicious while they are undergoing punishment. Moreover, a reformatory treatment will be pursued in the workhouses, and a certain part of the inmates will thus be made self-supporting. Again, the proposed discipline will become very irksome to incorrigible vagrants, who will naturally go elsewhere; and the actual expense of establishing the workhouses will not be great, since the members of the board of managers will receive no salaries, and the bill provides only for the hiring of buildings and the purchase of furniture, tools and raw material for the employment of the inmates. The plan can hardly fail to be heartily approved by all tax-payers as soon as it has a fair trial; for while it will not be felt in taxation, its indirect economy is obvious.

"There can not be two more significant bills than both of these. Their passage would be emphatically wise legislation. It would show that the State of New York is not unmindful

of the results of experience upon the two great subjects involved in the bills; that it means to reform as well as to punish its criminals, and to check the extension of pauperism."

It must not be presumed that our State authorities are not moving in the matters referred to in the preceding extract. The officers of the board of state charities recommend the reorganization of their department, and point out the opportunities for desirable and money-saving changes in the State's method of bestowing public charity. In speaking of the system of county prisons, which has existed since 1834, the secretary of the board says:—

"Our county prison system is quite unsatisfactory in its results, as was said last year, whether regard be had to the financial or the reformatory aspect. It is very expensive, and it does not reform. Whatever changes may be brought about by patient and persistent effort, it can not be made satisfactory to those who clearly see what should be accomplished by imprisonment for offences against social order; and we shall not bring about such results from our minor prisons as we ought to reach, till we abolish the present system, and substitute for it one based on the principle of state control."

The failures of our prison system are stated above to be of a financial and reformatory nature. That is, the convicts sentenced to hard labor are not obliged to work, because they have no work to do, and consequently their support is a clear burden. Besides, the convicts themselves get no education in labor, and leave the prison as unfitted for work as when they entered it. The prison commissioners credit the county officers generally with "energetic efforts, in the face of great difficulties, to employ prisoners sentenced to labor." In another part of their report they speak of the convicts standing around "listlessly," with nothing to do. It seems to be the growing opinion of well informed parties, that all the charitable and correctional institutions in the State should be under immediate State control, the executive officers in both departments having full powers, and being freed from all the vexations which result from having a system within a system.

A decided step in this direction was made by an order of the last Legislature, which directed the prison commissioners to consider the expediency of dividing the State into prison

districts, looking, of course, to the abolition of all county and municipal prisons.

The commissioners report to the present Legislature. The first section of the bill, prepared by them, reads as follows :—

"The Commonwealth is hereby divided into seven prison districts, in each of which shall be kept and maintained by the Commonwealth, a house of correction and a workhouse. All persons sentenced, in any prison district, to confinement in the house of correction or workhouse, shall serve out the sentence in the house of correction or workhouse in that district."

It has been found impossible to exert any reforming influence, or secure any remunerative labor from those persons convicted of light offences and sentenced to short terms of imprisonment. An officer of a Boston house of correction mentions the case of one man serving *eleven* thirty day sentences in one year! Section five, of the proposed bill, proposes a longer stay for certain classes of offenders. We present it below :—

"All persons convicted as common drunkards, or as vagrants, shall be punished by imprisonment in the workhouse, of the prison district in which they are convicted, for not less than six months, nor more than two years."

The commissioners mention the fact so plainly shown by the tables of "causes of imprisonment," which we have presented, that the majority of our convicts have been guilty of misdemeanors or violations of law and order rather than aggravated crimes. They mention the impropriety of confining such offenders in the same prisons with the worst criminals. The drunkards especially, they think, should be placed in workhouses rather than prisons. They conclude the argument, which they advance, to show the desirability and advantages of the proposed change, in the following words :—

"Indeed, it seems to us evident that to serve the triple purpose for which prisons are designed, viz., the protection of the community, punishment of crime and the reformation of the criminal, the system we recommend of district workhouses as complementary to the district houses of correction, presents the most simple, economical and effectual instrumentality.

"That the system, if established, would prove a saving of money, we think can be shown from the comparison of the net cost of supporting a prisoner in the larger with the same in the smaller prisons."

The "reformation" of the criminal above referred to, we suppose to mean the making a good citizen of him when his sentence has expired. This reformation we do not believe can ever be secured if a convict leaves a prison uneducated and unable to earn his living. A man who will not learn to read and write and earn his living outside of a prison, when he is committed to one, should stay there until he has made up his deficiencies.

Concerning the question of education in prisons, a law of the State provides that "the county commissioners of each county, and the aldermen of the city of Boston, with the sheriff of the county, may, at the expense of the county or city, furnish suitable instructions in reading and writing for one hour each evening, except Sundays, to such prisoners as may be benefited thereby and are desirous to receive the same."

The necessary changes in the above law would make it read that the proper officers *shall* furnish suitable instruction to those who are uneducated, and such studies *shall* be continued until the learners *are* benefited thereby. The State should be the judge of what forms a suitable education, and the criminal should receive one whether he was "desirous" or not.

The tables which we have presented are far from being as valuable as we could wish. A complete registry of the social statistics of each pauper and convict would supply material which could not fail to be of great service in dealing with paupers and convicts individually, and with pauperism and crime in the abstract. The statistics referred to hereinafter by the secretary of the board of state charities may be of the nature we suggest, but we have seen or heard of no *State* record of paupers. The secretary says:—

"The weekly and monthly returns of the county prisons are still received and filed by this office, but the valuable statistics which they embody are not available to the public, because the commissioners of prisons do not yet make any

special use of them, and the clerical force allowed me by the Legislature is not such that they can be tabulated in this office. This seems to me a matter for the serious consideration of the Legislature during the coming session. The board of state charities now performs no duty whatever respecting the county prisons, and therefore has no occasion to require reports from them as to the admission and discharge of prisoners. Hence, I can reach no other conclusion than that the Legislature should provide the commissioners of prisons with the necessary facilities for compiling the statistics and giving them to the public."

We trust such statistics will be gathered and published as will show, especially, the number of illiterate paupers and convicts, and the number of those, in both classes, who are unprepared to earn a living by some recognized and profitable employment. The great secret of preventing the extension of pauperism and the increase of crime, lies in this twofold education. The book education can be easily provided for. The industrial education will be a greater and, at first, a more perplexing undertaking. But it would be better and cheaper to establish and maintain industrial schools in every prison than to establish more courts of justice for offenders, or build one more prison for their incarceration.

We do not believe that the workingmen of Massachusetts would see any danger to themselves or their prosperity if the able-bodied paupers and the convicts were fitted to earn an honest living. We think, rather, that they would rejoice in that elevating process which would make self-supporting citizens out of the unfortunate and criminal classes.

The real injury to laboring men exists in supporting thousands in idleness by the proceeds of taxation, and in paying them trivial wages which enable the contractors for prison labor to make undue profits, or undersell their competitors in trade.

This article was not designed to be the vehicle of particular recommendations to secure the results which so many consider to be desirable. But we consider that the statistics which we give indicate the positive value of a complete system of registry. Upon that registry should be based the efforts for the twofold education which we have explained.

All these steps should be taken under uniform and energetic State control. In such case, we should look, and we think with reason, in due time, for a decrease in preventable pauperism and ignorant crime,—to a less expense, or deficiency, for the maintenance of charitable and correctional institutions, and a consequent lightening of taxation. All this would conduce to the relief and protection of the community, the alleviation of the condition of the poor and helpless, the judicious punishment of the wicked, and the practical reformation of the vagrant and criminal.

PART VI.

MASSACHUSETTS MANUFACTORIES:

PERSONS EMPLOYED IN EACH STORY, AND THEIR MEANS OF ESCAPE IN CASE OF FIRE.

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In the census schedules used in gathering the particulars concerning the manufactures of this State, certain inquiries were embraced which related particularly to the manufactories themselves. The points concerning which information was required, were, first, the size of the establishments, meaning the length and width in feet and the number of stories, designating the basements and attics; second, the number of persons employed in each story; and third, the particular means of escape in case of fire or panic, with information relating to doors swinging inwardly, outwardly, sliding, etc.

These matters have previously received consideration in public documents. Part V. of the fifth annual report of this Bureau was devoted to the consideration of the "condition of textile fabric manufactories in Massachusetts," and contained the results of investigations made by competent and reliable parties, in person, as regarded 233 such establishments. These investigations comprehended the means of escape in case of fire, the protection of shafting, the guarding and cleaning of machinery, the running of elevators, ventilation and the average air-space for operatives.

In Part III. of the sixth report of the Bureau, a special report was made upon the disaster at Granite Mills in Fall River, and a presentation was given showing the means of escape in case of fire or panic from the *upper stories* of the 233 textile manufactories previously mentioned. The article

closed with the outline of a "factory act" designed to secure the comfort and safety of working people in all kinds of manufactories.

The chief detective of the Commonwealth, in his report dated January, 1877, presented the results of the inspection, by three of his deputies, of 1,287 factories, considering the points already particularized, and, in addition, information in regard to steam boilers and accidents.

In taking the census, the owners or lessees of every establishment in the State, without regard to kind of business or number of persons employed, were called upon to answer the previously mentioned inquiries, and the returns were full and reliable. The figures in this article are presented here as being particularly statistics of labor.

We have selected for this article the returns of the 19 cities and 21 important manufacturing towns as far as they relate to the persons employed in each story and their means of escape in case of fire or panic.

The remaining towns are omitted for several reasons. Their establishments are usually small, rarely above two stories in height, and so situated as to render the escape of the few employés in case of danger almost a matter of certainty. The full presentation, also, would have occupied a hundred pages or more of this volume; and, in our opinion, the value of the statistics did not warrant their printing. The full returns are in the possession of the Bureau, however, and are available for any official purpose or legislative requirement.

A brief explanation of the tables may lead to an easier comprehension of the facts they contain. We will take the Fall River tables for illustration. In the first table we classify the persons employed under five divisions, which give the number of establishments employing 5 or less, 6 to 20, 21 to 100, 101 to 300, and above 300 persons. The number of persons employed in each story is given, with a designation of the number of stories of the various buildings. All the columns in this table contain the figures in duplicate, and, of course, the total given in either case is, and should be, only *half* the actual sum of the column. In the second table the means of escape are given in combination with a

classification showing the story in which employed and the number working there. The letters "f. e." following a figure indicate that a "fire escape" is supplied in connection with the other means of escape specified at the head of the column in which the figures occur. These means of escape relate particularly to *floors* or *rooms*, and the classification of number does not of course compare with the similar classification in the first table, which latter refers to the number of persons in *each establishment*.

The tables can be used in conjunction, as follows: from the first table we learn that 4,349 persons work in the *second stories* of buildings in Fall River. For them are supplied (see means of escape from *second* story in second table) 89 stairways and 29 fire escapes, or an average to each of 37 persons. In the sixth story are employed 775 persons, having 20 stairways and 12 fire escapes, being an average to each of 24 persons.

The 19 cities are given in their county order; then follow the 21 towns in similar order; recapitulations of the important points in the tables complete the statistical presentation.

City of Fall River, Bristol County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establ'ts.	Persons Employed in each Story.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 5 or less persons,	120	207	37	20	–	–	–	264
In one-story buildings,	99	205	–	–	–	–	–	205
In two-story buildings,	16	2	37	–	–	–	–	39
In three-story buildings,	5	–	–	20	–	–	–	20
Employing 6 to 20 persons,	62	341	240	80	–	12	–	673
In one-story buildings,	31	308	–	–	–	–	–	308
In two-story buildings,	22	17	227	–	–	–	–	244
In three-story buildings,	8	16	13	80	–	–	–	109
In five-story buildings,	1	–	–	–	–	12	–	12
Employing 21 to 100 persons,	21	421	395	32	79	–	–	927
In one-story buildings,	7	223	–	–	–	–	–	223
In two-story buildings,	10	183	271	–	–	–	–	454
In four-story buildings,	4	15	124	32	79	–	–	250
Employing 101 to 300 persons,	16	994	770	513	403	346	113	3,139
In one-story buildings,	1	230	–	–	–	–	–	230
In two-story buildings,	1	90	20	–	–	–	–	110
In four-story buildings,	4	153	197	100	140	–	–	590
In five-story buildings,	5	330	289	255	155	236	–	1,265
In six-story buildings,	5	191	264	158	108	110	113	944
Employing over 300 persons,	22	2,744	2,907	2,102	1,619	1,557	662	11,591
In four-story buildings,	1	216	140	120	139	–	–	615
In five-story buildings,	12	1,261	1,317	972	851	889	–	5,290
In six-story buildings,	9	1,267	1,450	1,010	629	668	662	5,686
Totals,	241	4,707	4,349	2,747	2,101	1,915	775	16,594

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.				
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.
From second story—					
For 5 or less persons,	22	3 f. e.	–	1	1
For 6 to 20 persons,	22	–	–	1	–
For 21 to 100 persons,	5 6 f. e.	–	–	–	8 f. e.
For 101 to 300 persons,	1 f. e.	2 f. e.	1 f. e.	–	7 f. e.
For over 300 persons,	–	1 f. e.	–	–	–
From third story—					
For 5 or less persons,	10	–	–	–	–
For 6 to 20 persons,	3 2 f. e.	–	1 f. e.	–	–
For 21 to 100 persons,	1 5 f. e.	11 f. e.	3	–	8 f. e.
For 101 to 300 persons,	1 f. e.	3 f. e.	–	–	3 f. e.
From fourth story—					
For 5 or less persons,	1 f. e.	–	–	–	1 f. e.
For 6 to 20 persons,	1 5 f. e.	2 f. e.	–	–	1 f. e.
For 21 to 100 persons,	4 f. e.	10 f. e.	3 f. e.	–	8 f. e.
For 101 to 300 persons,	1 f. e.	1 f. e.	–	–	2 f. e.
From fifth story—					
For 6 to 20 persons,	2 f. e.	2 f. e.	–	–	–
For 21 to 100 persons,	5 f. e.	9 f. e.	3 f. e.	–	8 f. e.
For 101 to 300 persons,	–	–	2 f. e.	–	2 f. e.
From sixth story—					
For 6 to 20 persons,	1 f. e.	–	1 f. e.	–	–
For 21 to 100 persons,	1 f. e.	4 f. e.	1 f. e.	–	4 f. e.

City of New Bedford, Bristol County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 5 or less persons,	135	299	93	3	–	–	395
In one-story buildings,	100	275	–	–	–	–	275
In two-story buildings,	33	23	90	–	–	–	113
In three-story buildings,	2	1	3	3	–	–	7
Employing 6 to 20 persons,	80	432	292	50	15	–	789
In one-story buildings,	33	293	–	–	–	–	293
In two-story buildings,	38	103	263	–	–	–	366
In three-story buildings,	8	36	29	50	–	–	115
In four-story buildings,	1	–	–	–	15	–	15
Employing 21 to 100 persons,	19	363	213	160	8	–	744
In one-story buildings,	3	130	–	–	–	–	130
In two-story buildings,	7	193	126	–	–	–	319
In three-story buildings,	7	30	73	140	–	–	243
In four-story buildings,	2	10	14	20	8	–	52
Employing 101 to 300 persons,	6	178	347	151	55	–	731
In three-story buildings,	4	163	252	94	–	–	509
In four-story buildings,	2	15	95	57	55	–	222
Employing over 300 persons,	2	495	344	552	445	147	1,983
In four-story buildings,	1	231	82	50	120	–	483
In five-story buildings,	1	264	262	502	325	147	1,500
Totals,	242	1,767	1,289	916	523	147	4,642

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.				
	One inside stairway.	Two inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—					
For 5 or less persons,	47 1 f. e.	–	1	–	1
For 6 to 20 persons,	39	1	1	–	–
For 21 to 100 persons,	4 2 f. e.	1 f. e.	–	1 f. e.	2
For 101 to 300 persons,	–	–	–	1 f. e.	–
From third story—					
For 5 or less persons,	3 1 f. e.	–	1	–	–
For 6 to 20 persons,	1 f. e. 10	–	–	–	1
For 21 to 100 persons,	7	1	–	1 f. e.	–
For over 300 persons,	–	–	–	1 f. e.	–
From fourth story—					
For 5 or less persons,	3	–	–	–	–
For 6 to 20 persons,	1	–	–	–	–
For 21 to 100 persons,	–	–	–	1 f. e.	–
For over 300 persons,	–	–	–	1 f. e.	–
From fifth story—					
For 101 to 300 persons,	–	–	–	1 f. e.	–

CITY OF TAUNTON, BRISTOL COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 5 or less persons,	67	114	44	6	7	–	171
In one-story buildings,	47	112	–	–	–	–	112
In two-story buildings,	15	2	43	–	–	–	45
In three-story buildings,	3	–	1	6	–	–	7
In four-story buildings,	2	–	–	–	7	–	7
Employing 6 to 20 persons,	46	329	205	37	–	–	571
In one-story buildings,	22	228	–	–	–	–	228
In two-story buildings,	19	91	173	–	–	–	264
In three-story buildings,	5	10	32	37	–	–	79
Employing 21 to 100 persons,	13	461	220	53	6	–	740
In one-story buildings,	2	145	–	–	–	–	145
In two-story buildings,	9	272	184	–	–	–	456
In three-story buildings,	1	16	21	23	–	–	60
In four-story buildings,	1	28	15	30	6	–	79
Employing 101 to 300 persons,	5	344	271	165	44	12	836
In two-story buildings,	1	130	100	–	–	–	230
In three-story buildings,	2	145	90	95	–	–	330
In four-story buildings,	1	47	35	40	28	–	150
In five-story buildings,	1	22	46	30	16	12	126
Employing over 300 persons,	3	390	423	327	110	–	1,250
In three-story buildings,	1	140	140	70	–	–	350
In four-story buildings,	2	250	283	257	110	–	900
Totals,	134	1,638	1,163	588	167	12	3,568

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.				
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.
From second story—					
For 5 or less persons,	19	–	–	1	–
For 6 to 20 persons,	19	1	–	2	1 f. e.
For 21 to 100 persons,	6	2 1 f. e.	3	–	1 f. e.
For 101 to 300 persons,	2 f. e.	–	–	–	1 f. e.
From third story—					
For 5 or less persons,	4	–	–	–	–
For 6 to 20 persons,	4	–	–	–	–
For 21 to 100 persons,	3 4 f. e.	2 1 f. e.	–	–	1 f. e.
From fourth story—					
For 5 or less persons,	2	–	–	–	–
For 6 to 20 persons,	1 f. e.	–	–	–	–
For 21 to 100 persons,	1 f. e.	–	–	–	2 f. e.
From fifth story—					
For 5 or less persons,	1 f. e.	–	–	–	–

CITY OF GLOUCESTER, ESSEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.			Totals.
		1st.	2d.	3d.	
Employing 5 or less persons,	67	141	33	-	174
In one-story buildings,	55	132	-	-	132
In two-story buildings,	12	9	33	-	42
Employing 6 to 20 persons,	33	200	90	14	304
In one-story buildings,	17	143	-	-	143
In two-story buildings,	12	53	78	-	131
In three-story buildings,	4	4	12	14	30
Employing 21 to 100 persons,	5	119	66	8	193
In one-story buildings,	2	89	-	-	89
In two-story buildings,	2	22	54	-	76
In three-story buildings,	1	8	12	8	28
Totals,	105	460	189	22	671

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.				
	One inside stairway.	Two inside stairways.	Three inside stairways.	Five inside stairways.	Outside stairway.
From second story—					
For 5 or less persons,	20	-	-	-	1
For 6 to 20 persons,	9	-	-	-	-
For 21 to 100 persons,	1	-	-	-	-
From third story—					
For 5 or less persons,	3	-	-	-	-
For 6 to 20 persons,	2	-	-	-	-

CITY OF HAVERHILL, ESSEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 5 or less persons,	190	304	144	30	4	1	483
In one-story buildings,	119	290	–	–	–	–	290
In two-story buildings,	54	11	137	–	–	–	148
In three-story buildings,	13	3	7	27	–	–	37
In four-story buildings,	3	–	–	3	4	–	7
In five-story buildings,	1	–	–	–	–	1	1
Employing 6 to 20 persons,	80	327	323	206	42	–	898
In one-story buildings,	27	226	–	–	–	–	226
In two-story buildings,	25	62	225	–	–	–	287
In three-story buildings,	29	28	76	172	–	–	276
In four-story buildings,	8	11	22	34	42	–	109
Employing 21 to 100 persons,	36	164	429	441	335	26	1,395
In one-story buildings,	1	30	–	–	–	–	30
In two-story buildings,	7	4	220	–	–	–	224
In three-story buildings,	12	61	86	253	–	–	400
In four-story buildings,	13	50	87	152	282	–	571
In five-story buildings,	3	19	36	36	53	26	170
Employing 101 to 300 persons,	2	7	13	74	142	106	342
In four-story buildings,	1	4	7	64	92	–	167
In five-story buildings,	1	3	6	10	50	106	175
Totals,	317	802	909	751	523	133	3,118

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.				
	One inside stairway.	Two inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—					
For 5 or less persons,	81	3	–	–	2
For 6 to 20 persons,	31	–	4	1 f. e.	1
For 21 to 100 persons,	9	–	–	–	–
From third story—					
For 5 or less persons,	31	–	1	–	2
For 6 to 20 persons,	34	–	–	1 f. e.	–
For 21 to 100 persons,	8	–	–	–	–
From fourth story—					
For 5 or less persons,	8	–	–	–	–
For 6 to 20 persons,	13	–	–	–	–
For 21 to 100 persons,	8	–	–	–	–
From fifth story—					
For 5 or less persons,	1	1	–	–	–
For 6 to 20 persons,	2	–	–	–	–
For 101 to 300 persons,	1	–	–	–	–

City of Lawrence, Essex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Estab'ts.	Persons Employed in each Story.								Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	
Employing 5 or less persons,	137	229	56	16	5	–	–	–	–	306
In one-story buildings,	88	183	–	–	–	–	–	–	–	183
In two-story buildings,	30	31	46	–	–	–	–	–	–	77
In three-story buildings,	10	8	5	10	–	–	–	–	–	23
In four-story buildings,	9	7	5	6	5	–	–	–	–	23
Employing 6 to 20 persons,	51	284	146	77	4	–	–	–	–	511
In one-story buildings,	19	192	–	–	–	–	–	–	–	192
In two-story buildings,	13	48	56	–	–	–	–	–	–	104
In three-story buildings,	16	34	67	71	–	–	–	–	–	172
In four-story buildings,	3	10	23	6	4	–	–	–	–	43
Employing 21 to 100 persons,	18	432	331	110	15	–	–	–	–	888
In one-story buildings,	4	119	–	–	–	–	–	–	–	119
In two-story buildings,	7	166	143	–	–	–	–	–	–	309
In three-story buildings,	5	98	129	85	–	–	–	–	–	312
In four-story buildings,	2	49	59	25	15	–	–	–	–	148
Employing 101 to 300 persons,	2	134	98	85	38	–	–	–	–	355
In two-story buildings,	1	49	60	–	–	–	–	–	–	109
In five-story buildings,	1	85	38	85	38	–	–	–	–	246
Employing over 300 persons,	6	2,572	2,746	2,052	1,288	458	468	336	92	10,012
In five-story buildings,	2	592	340	211	189	89	–	–	–	1,421
In six-story buildings,	1	182	88	92	100	40	131	–	–	633
In seven-story buildings,	2	1,415	1,692	1,044	968	295	295	274	–	5,983
In eight-story buildings,	1	383	626	705	31	34	42	62	92	1,975
Totals,	214	3,651	3,377	2,340	1,350	458	468	336	92	12,072

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Five inside stairways.	Outside stairway.	Tower stairways.
From second story—						
For 5 or less persons,	22	–	–	–	3	–
For 6 to 20 persons,	14	1	–	–	1	–
For 21 to 100 persons,	11	–	–	–	–	3 f. e.
For 101 to 300 persons,	1 f. e.	–	–	–	–	5 f. e.
For over 300 persons,	1 f. e.	–	–	1 f. e.	–	–
From third story—						
For 5 or less persons,	8	1	–	–	–	–
For 6 to 20 persons,	8	1	–	–	–	–
For 21 to 100 persons,	2	1 f. e.	1	–	–	2
For 101 to 300 persons,	2 f. e.	–	–	–	–	4 f. e.
For over 300 persons,	–	–	–	1 f. e.	–	1 f. e.
From fourth story—						
For 5 or less persons,	1	–	–	–	–	–
For 6 to 20 persons,	1	–	–	–	–	–
For 21 to 100 persons,	–	1	–	–	–	1 f. e.
For 101 to 300 persons,	2 f. e.	–	–	–	–	5 f. e.
For over 300 persons,	–	–	–	1 f. e.	–	–
From fifth story—						
For 21 to 100 persons,	1 f. e.	–	–	–	–	3 f. e.
For 101 to 300 persons,	–	–	–	1 f. e.	–	1 f. e.
From sixth story—						
For 21 to 100 persons,	–	–	–	–	–	1 f. e.
For 101 to 300 persons,	1 f. e.	–	–	1 f. e.	–	1 f. e.
From seventh story—						
For 21 to 100 persons,	–	–	–	–	–	2 f. e.
For 101 to 300 persons,	–	–	–	1 f. e.	–	–
From eighth story—						
For 21 to 100 persons,	–	–	–	–	–	1 f. e.

CITY OF LYNN, ESSEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 5 or less persons,	216	414	94	13	5	–	–	526
In one-story buildings,	165	391	–	–	–	–	–	391
In two-story buildings,	34	17	89	–	–	–	–	106
In three-story buildings,	15	4	4	13	–	–	–	21
In four-story buildings,	2	2	1	–	5	–	–	8
Employing 6 to 20 persons,	157	661	569	362	65	–	–	1,657
In one-story buildings,	45	401	–	–	–	–	–	401
In two-story buildings,	70	216	530	–	–	–	–	746
In three-story buildings,	35	34	34	341	–	–	–	409
In four-story buildings,	7	10	5	21	65	–	–	101
Employing 21 to 100 persons,	109	775	1,285	1,312	712	396	–	4,480
In one-story buildings,	4	127	–	–	–	–	–	127
In two-story buildings,	28	246	602	–	–	–	–	848
In three-story buildings,	35	231	409	882	–	–	–	1,522
In four-story buildings,	30	90	168	312	498	–	–	1,068
In five-story buildings,	12	81	106	118	214	396	–	915
Employing 101 to 300 persons,	20	366	628	995	881	633	139	3,642
In three-story buildings,	2	42	80	128	–	–	–	250
In four-story buildings,	6	177	344	377	430	–	–	1,328
In five-story buildings,	11	146	194	470	391	613	–	1,814
In six-story buildings,	1	1	10	20	60	20	139	250
Totals,	502	2,216	2,576	2,682	1,663	1,029	139	10,305

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.			
	One inside stairway.	Two inside stairways.	Outside stairway.	Inside and outside stairways.
From second story—				
For 5 or less persons,	84	2	–	–
For 6 to 20 persons,	84	10	3	4
For 21 to 100 persons,	31	5	–	–
From third story—				
For 5 or less persons,	24	4	1	–
For 6 to 20 persons,	52	12	5	–
For 21 to 100 persons,	31	4	3	1
For 101 to 300 persons,	–	1	–	–
From fourth story—				
For 5 or less persons,	5	–	–	–
For 6 to 20 persons,	10	2	1	–
For 21 to 100 persons,	29	5	–	–
For 101 to 300 persons,	1	1	–	–
From fifth story—				
For 6 to 20 persons,	2	–	–	–
For 21 to 100 persons,	14	3	1	–
For 101 to 300 persons,	1	–	–	–
From sixth story—				
For 101 to 300 persons,	1	–	–	–

CITY OF NEWBURYPORT, ESSEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY. 1st.	2d.	3d.	4th.	5th.	6th.	Totals.
Employing 5 or less persons,	82	162	42	18	–	–	–	222
In one-story buildings,	60	161	–	–	–	–	–	161
In two-story buildings,	15	1	42	–	–	–	–	43
In three-story buildings,	7	–	–	18	–	–	–	18
Employing 6 to 20 persons,	42	288	119	62	–	–	–	469
In one-story buildings,	22	245	–	–	–	–	–	245
In two-story buildings,	13	40	105	–	–	–	–	145
In three-story buildings,	7	3	14	62	–	–	–	79
Employing 21 to 100 persons,	9	220	106	175	–	–	–	501
In one-story buildings,	3	178	–	–	–	–	–	178
In two-story buildings,	1	35	40	–	–	–	–	75
In three-story buildings,	5	7	66	175	–	–	–	248
Employing 101 to 300 persons,	6	280	364	325	187	49	–	1,205
In two-story buildings,	1	130	20	–	–	–	–	150
In three-story buildings,	1	25	65	19	–	–	–	109
In four-story buildings,	2	53	80	180	112	–	–	425
In five-story buildings,	2	72	199	126	75	49	–	521
Employing over 300 persons,	1	78	110	60	35	33	34	350
In six-story buildings,	1	78	110	60	35	33	34	350
Totals,	140	1,028	741	640	222	82	34	2,747

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE. One inside stairway.	Two inside stairways.	Three inside stairways.	Five inside stairways.	Tower stairways.	Inside and outside stairways.
From second story—						
For 5 or less persons,	19	–	–	–	–	–
For 6 to 20 persons,	16	1	–	–	–	–
For 21 to 100 persons,	1	1 f. e.	–	–	2 f. e.	1
For 101 to 300 persons,	–	–	–	–	2 f. e.	–
From third story—						
For 5 or less persons,	9	–	–	–	–	–
For 6 to 20 persons,	7	–	–	–	–	–
For 21 to 100 persons,	3	–	–	–	2 f. e.	1
For 101 to 300 persons,	–	–	–	–	2 f. e.	–
From fourth story—						
For 6 to 20 persons,	–	–	–	–	1 f. e.	–
For 21 to 100 persons,	1	–	–	–	3 f. e.	–
From fifth story—						
For 6 to 20 persons,	–	–	–	–	1 f. e.	–
For 21 to 100 persons,	–	–	–	–	2 f. e.	–
From sixth story—						
For 21 to 100 persons,	–	–	–	–	1 f. e.	–

CITY OF SALEM, ESSEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 5 or less persons,	294	532	188	–	29	–	–	749
In one-story buildings,	210	518	–	–		–	–	518
In two-story buildings,	72	14	183	–	–	–	–	197
In three-story buildings,	12	–	5	–	29	–	–	34
Employing 6 to 20 persons,	120	764	352	164	–	–	–	1,280
In one-story buildings,	54	531	–	–	–	–	–	531
In two-story buildings,	38	136	213	–	–	–	–	379
In three-story buildings,	28	97	109	164	–	–	–	370
Employing 21 to 100 persons,	27	359	296	268	23	3	–	949
In one-story buildings,	5	139	–	–	–	–	–	139
In two-story buildings,	7	50	113	–	–	–	–	163
In three-story buildings,	10	132	122	224	–	–	–	478
In four-story buildings,	4	20	30	28	20	–	–	98
In five-story buildings,	1	18	31	16	3	3	–	71
Employing 101 to 300 persons,	4	276	94	70	22	20	18	500
In two-story buildings,	2	196	24	–	–	–	–	220
In three-story buildings,	1	50	50	30	–	–	–	130
In six-story buildings,	1	30	20	40	22	20	18	150
Employing over 300 persons,	1	493	321	236	138	147	–	1,335
In five-story buildings,	1	493	321	236	138	147	–	1,335
Totals,	446	2,424	1,251	738	212	170	18	4,813

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—						
For 5 or less persons,	91 1 f. e.	1	–	2	–	1
For 6 to 20 persons,	43 2 f. e.	8	–	1	–	–
For 21 to 100 persons,	3	–	–	–	1	–
For 101 to 300 persons,	–	–	–	–	1 f. e.	–
From third story—						
For 5 or less persons,	28	1	–	1	–	–
For 6 to 20 persons,	19	3	–	1	–	–
For 21 to 100 persons,	1 f. e.	2	–	1	–	–
For 101 to 300 persons,	–	–	–	–	1 f. e.	–
From fourth story—						
For 5 or less persons,	2	–	–	–	–	–
For 6 to 20 persons,	2 1 f. e.	2	–	–	–	–
For 101 to 300 persons,	–	–	–	–	1 f. e.	–
From fifth story—						
For 5 or less persons,	1	–	–	–	–	–
For 6 to 20 persons	1	–	–	–	–	–
For 101 to 300 persons,	–	–	–	–	1 f. e.	–
From sixth story—						
For 6 to 20 persons,	1 f. e.	–	–	–	–	–

City of Holyoke, Hampden County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 6 to 20 persons,	1	10	6	–	–	–	–	16
In two-story buildings,	1	10	6	–	–	–	–	16
Employing 21 to 100 persons,	9	229	273	60	18	3	–	583
In two-story buildings,	3	75	98	–	–	–	–	173
In three-story buildings,	4	98	115	53	–	–	–	266
In four-story buildings,	1	28	15	1	1	–	–	45
In five-story buildings,	1	28	45	6	17	3	–	99
Employing 101 to 300 persons,	13	457	618	797	427	64	–	2,363
In three-story buildings,	3	80	100	175	–	–	–	355
In four-story buildings,	5	130	264	337	243	–	–	974
In five-story buildings,	5	247	254	285	184	64	–	1,034
Employing over 300 persons,	4	693	684	493	420	252	113	2,655
In three-story buildings,	1	178	290	140	–	–	–	608
In four-story buildings,	1	149	54	111	19	–	–	333
In five-story buildings,	1	98	91	8	122	113	–	432
In six-story buildings,	1	268	249	234	279	139	113	1,282
Totals,	27	1,389	1,581	1,350	865	319	113	5,617

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.				
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.
From second story—					
For 6 to 20 persons,	1 2 f. e.	–	–	–	–
For 21 to 100 persons,	2 12 f. e.	–	–	1 f. e.	2 4 f. e.
For 101 to 300 persons,	2 f. e.	–	–	–	–
From third story—					
For 5 or less persons,	2 f. e.	–	–	–	–
For 6 to 20 persons,	2 f. e.	–	–	–	1
For 21 to 100 persons,	1 8 f. e.	–	–	1 f. e.	4 f. e.
For 101 to 300 persons,	2 f. e.	–	–	–	1
From fourth story—					
For 5 or less persons,	3 f. e.	–	–	–	–
For 6 to 20 persons,	1 f. e.	1	–	–	1
For 21 to 100 persons,	4 f. e.	–	–	–	3 f. e.
For 101 to 300 persons,	1 f. e.	–	–	–	1 f. e.
From fifth story—					
For 5 or less persons,	2 f. e.	1	–	–	–
For 6 to 20 persons,	–	–	–	–	2 f. e. 1
For 21 to 100 persons,	–	–	–	–	1 f. e.
For 101 to 300 persons,	1 f. e.	–	–	–	–
From sixth story—					
For 101 to 300 persons,	1 f. e.	–	–	–	–

CITY OF SPRINGFIELD, HAMPDEN COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 5 or less persons,	243	452	104	52	10	–	–	618
In one-story buildings,	184	441	–	–	–	–	–	441
In two-story buildings,	36	11	101	–	–	–	–	112
In three-story buildings,	19	–	3	52	–	–	–	55
In four-story buildings,	4	–	–	–	10	–	–	10
Employing 6 to 20 persons,	132	781	407	135	47	8	–	1,378
In one-story buildings,	65	657	–	–	–	–	–	657
In two-story buildings,	45	108	308	–	–	–	–	476
In three-story buildings,	17	16	39	120	–	–	–	175
In four-story buildings,	4	–	–	15	47	–	–	62
In five-story buildings,	1	–	–	–	–	8	–	8
Employing 21 to 100 persons,	54	1,220	380	364	257	5	2	2,228
In one-story buildings,	21	917	–	–	–	–	–	917
In two-story buildings,	9	125	171	–	–	–	–	296
In three-story buildings,	13	95	150	220	–	–	–	465
In four-story buildings,	9	59	51	133	247	–	–	490
In five-story buildings,	1	2	5	8	10	5	–	30
In six-story buildings,	1	22	3	3	–	–	2	30
Employing 101 to 300 persons,	6	167	180	246	70	140	111	914
In three-story buildings,	2	97	72	88	–	–	–	257
In four-story buildings,	1	33	40	24	13	–	–	110
In five-story buildings,	1	31	19	93	30	35	–	208
In six-story buildings,	2	6	49	41	27	105	111	339
Employing over 300 persons,	3	686	210	325	220	48	40	1,529
In one-story buildings,	1	341	–	–	–	–	–	341
In four-story buildings,	1	125	80	175	120	–	–	500
In six-story buildings,	1	220	130	150	100	48	40	688
Totals,	438	3,306	1,281	1,122	604	201	153	6,667

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—						
For 5 or less persons,	53	2 1 f. e.	–	4	–	–
For 6 to 20 persons,	51 1 f. e.	1	–	2	–	–
For 21 to 100 persons,	5	1	1	–	1 f. e.	–
For 101 to 300 persons,	1 f. e.	–	–	–	–	–
From third story—						
For 5 or less persons,	28 1 f. e.	–	–	1	–	–
For 6 to 20 persons,	23	–	–	–	–	3
For 21 to 100 persons,	7	2 1 f. e.	–	–	–	–
For 101 to 300 persons,	1 f. e.	–	–	–	1 f. e.	–
From fourth story—						
For 5 or less persons,	5 1 f. e.	–	–	–	–	1
For 6 to 20 persons,	8	1	–	–	–	–
For 21 to 100 persons,	4 3 f. e.	–	–	–	–	–
For 101 to 300 persons,	–	–	–	–	1 f. e.	–
From fifth story—						
For 5 or less persons,	1	–	–	–	–	–
For 6 to 20 persons,	1	1	–	–	–	–
For 21 to 100 persons,	1 f. e. 2	–	–	–	–	–
From sixth story—						
For 5 or less persons,	1	–	–	–	–	–
For 21 to 100 persons,	2 1 f. e.	1	–	–	–	–

CITY OF CAMBRIDGE, MIDDLESEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 5 or less persons,	197	364	86	21	3	–	–	474
In one-story buildings,	158	358	–	–	–	–	–	358
In two-story buildings,	33	6	86	–	–	–	–	92
In three-story buildings,	5	–	–	20	–	–	–	20
In four-story buildings,	1	–	–	1	3	–	–	4
Employing 6 to 20 persons,	88	621	255	43	30	–	–	949
In one-story buildings,	47	498	–	–	–	–	–	498
In two-story buildings,	28	92	215	–	–	–	–	307
In three-story buildings,	10	19	30	41	–	–	–	90
In four-story buildings,	3	12	10	2	30	–	–	54
Employing 21 to 100 persons,	44	975	487	265	152	36	–	1,915
In one-story buildings,	14	497	–	–	–	–	–	497
In two-story buildings,	11	234	205	–	–	–	–	439
In three-story buildings,	8	124	119	138	–	–	–	381
In four-story buildings,	5	84	82	68	64	–	–	298
In five-story buildings,	6	36	81	59	88	36	–	300
Employing 101 to 300 persons,	13	1,406	482	400	250	20	10	2,568
In one-story buildings,	5	1,026	–	–	–	–	–	1,026
In two-story buildings,	1	45	72	–	–	–	–	117
In three-story buildings,	2	225	185	145	–	–	–	555
In four-story buildings,	4	90	180	245	230	–	–	745
In six-story buildings,	1	20	45	10	20	20	10	115
Employing over 300 persons,	2	279	179	67	135	43	–	703
In four-story buildings,	1	200	100	–	75	–	–	375
In five-story buildings,	1	79	79	67	60	43	–	328
Totals,	344	3,645	1,489	796	570	99	10	6,609

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—						
For 5 or less persons,	48	–	–	4	–	–
For 6 to 20 persons,	32 2 f. e.	–	–	–	1 f. e.	3
For 21 to 100 persons,	12 3 f. e.	–	–	–	–	1
From third story—						
For 5 or less persons,	17	–	1	–	–	–
For 6 to 20 persons,	13 1 f. e.	–	–	–	–	1
For 21 to 100 persons,	6 2 f. e.	1 f. e.	–	–	1 f. e.	1
From fourth story—						
For 5 or less persons,	4	–	–	–	–	–
For 6 to 20 persons,	8 1 f. e.	1	–	–	–	1
For 21 to 100 persons,	5 3 f. e.	–	–	–	–	–
From fifth story—						
For 5 or less persons,	3	–	–	–	–	–
For 21 to 100 persons,	1 f. e.	–	–	–	–	–
From sixth story—						
For 6 to 20 persons,	1 f. e.	–	–	–	–	–

City of Lowell, Middlesex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.							Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	7th.	
Employing 5 or less persons,	198	361	97	45	–	–	–	–	503
In one-story buildings,	151	358	–	–	–	–	–	–	358
In two-story buildings,	35	3	96	–	–	–	–	–	99
In three-story buildings,	12	–	1	45	–	–	–	–	46
Employing 6 to 20 persons,	103	595	326	146	44	–	–	–	1,111
In one-story buildings,	41	431	–	–	–	–	–	–	431
In two-story buildings,	37	131	264	–	–	–	–	–	395
In three-story buildings,	20	19	56	141	–	–	–	–	216
In four-story buildings,	5	14	6	5	44	–	–	–	69
Employing 21 to 100 persons,	54	1,078	525	515	75	–	–	–	2,193
In one-story buildings,	13	581	–	–	–	–	–	–	581
In two-story buildings,	13	265	146	–	–	–	–	–	411
In three-story buildings,	21	171	304	387	–	–	–	–	862
In four-story buildings,	7	61	75	128	75	–	–	–	339
Employing 101 to 300 persons,	9	772	428	312	89	46	–	–	1,647
In one-story buildings,	1	283	–	–	–	–	–	–	283
In two-story buildings,	1	78	96	–	–	–	–	–	174
In three-story buildings,	2	87	71	140	–	–	–	–	298
In four-story buildings,	2	54	79	67	47	–	–	–	247
In five-story buildings,	3	270	182	105	42	46	–	–	645
Employing over 300 persons,	9	2,753	2,709	2,198	1,246	1,217	503	100	10,726
In five-story buildings,	2	466	475	607	294	274	–	–	2,116
In six-story buildings,	6	2,157	2,099	1,404	874	861	400	–	7,795
In seven-story buildings,	1	130	135	187	78	82	103	100	815
Totals,	373	5,559	4,085	3,216	1,454	1,263	503	100	16,180

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Five inside stairways.	Outside stairway.	Tower stairways.
From second story—						
For 5 or less persons,	47 1 f. e.	–	–	–	11	1
For 6 to 20 persons,	46	–	3	–	4	2 1 f. e.
For 21 to 100 persons,	3 4 f. e.	2	3	–	–	4 f. e. 1
For 101 to 300 persons,	1	–	–	–	–	3 f. e.
For over 300 persons,	1 f. e.	–	–	1 f. e.	–	3 f. e.
From third story—						
For 5 or less persons,	20	1	–	–	3	–
For 6 to 20 persons,	20	1	–	–	3	1
For 21 to 100 persons,	10 3 f. e.	1	–	–	–	5 f. e. 1
For 101 to 300 persons,	1	–	–	–	–	4 f. e.
For over 300 persons,	1 f. e.	–	–	–	–	2 f. e.
From fourth story—						
For 5 or less persons,	4	–	–	–	–	–
For 6 to 20 persons,	7 2 f. e.	–	–	–		1 f. e.
For 21 to 100 persons,	1	–	–	–	–	1 5 f. e.
For 101 to 300 persons,	1 f. e.	–	–	–	–	3 f. e.
For over 300 persons,	–	–	–	–	–	1 f. e.
From fifth story—						
For 6 to 20 persons,	1 f. e.	–	–	–	–	–
For 21 to 100 persons,	–	–	–	–	–	6 f. e.
For 101 to 300 persons,	1 f. e.	–	–	–	–	3 f. e.

Lowell—Means of Escape in case of Fire—Continued.

CLASSIFICATION.	MEANS OF ESCAPE.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Five inside stairways.	Outside stairway.	Tower stairways.
From sixth story—						
For 6 to 20 persons,	1	–	–	–	–	–
For 21 to 100 persons,	–	–	–	–	–	4 f. e.
For 101 to 300 persons,	–	–	–	–	–	2 f. e.
From seventh story—						
For 21 to 100 persons,	–	–	–	–	–	2 f. e.

City of Newton, Middlesex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishts.	PERSONS EMPLOYED IN EACH STORY.				Totals.
		1st.	2d.	3d.	4th.	
Employing 5 or less persons,	44	124	6	–	–	130
In one-story buildings,	42	122	–	–	–	122
In two-story buildings,	2	2	6	–	–	8
Employing 6 to 20 persons,	36	349	14	14	–	377
In one-story buildings,	32	323	–	–	–	323
In two-story buildings,	3	26	14	–	–	40
In three-story buildings,	1	–	–	14	–	14
Employing 21 to 100 persons,	10	215	98	15	20	348
In one-story buildings,	3	85	–	–	–	85
In two-story buildings,	4	99	48	–	–	147
In three-story buildings,	1	23	36	1	–	60
In four-story buildings,	2	8	14	14	20	56
Employing 101 to 300 persons,	3	200	132	58	58	448
In two-story buildings,	1	100	75	–	–	175
In four-story buildings,	2	100	57	58	58	273
Totals,	93	888	250	87	78	1,303

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.				
	One inside stairway.	Two inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—					
For 5 or less persons,	4	–	1	1 f. e.	–
For 6 to 20 persons,	5	–	–	–	–
For 21 to 100 persons,	1 2 f. e.	1	–	–	–
From third story—					
For 5 or less persons,	–	–	–	–	1
For 6 to 20 persons,	1	–	–	1	–
For 21 to 100 persons,	1 1 f. e.	–	–	–	–
From fourth story—					
For 5 or less persons,	1	–	–	–	–
For 6 to 20 persons,	1 f. e.	–	–	1 f. e.	–
For 21 to 100 persons,	1	–	–	–	–

CITY OF SOMERVILLE, MIDDLESEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 5 or less persons,	73	151	29	4	–	–	184
In one-story buildings,	61	142	–	–	–	–	142
In two-story buildings,	11	9	29	–	–	–	38
In three-story buildings,	1	–	–	4	–	–	4
Employing 6 to 20 persons,	26	224	58	5	–	–	287
In one-story buildings,	16	187	–	–	–	–	187
In two-story buildings,	9	32	53	–	–	–	85
In three-story buildings,	1	5	5	5	–	–	15
Employing 21 to 100 persons,	13	501	83	35	–	–	619
In one-story buildings,	9	404	–	–	–	–	404
In two-story buildings,	1	60	10	–	–	–	70
In three-story buildings,	3	37	73	35	–	–	145
Employing 101 to 300 persons,	2	164	58	60	40	19	341
In three-story buildings,	1	124	18	20	–	–	162
In five-story buildings,	1	40	40	40	40	19	179
Employing over 300 persons,	1	350	–	–	–	–	350
In one-story buildings,	1	350	–	–	–	–	350
Totals,	115	1,390	228	104	40	19	1,781

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.				
	One inside stairway.	Two inside stairways.	Three inside stairways.	Five inside stairways.	Outside stairway.
From second story—					
For 5 or less persons,	14	–	–	–	1
For 6 to 20 persons,	8	1	–	–	–
For 21 to 100 persons,	2 1 f. e.	–	–	–	–
From third story—					
For 5 or less persons,	3	–	–	–	–
For 6 to 20 persons,	1 1 f. e.	1	–	–	–
From fourth story—					
For 21 to 100 persons,	1 f. e.	–	–	–	–
From fifth story—					
For 101 to 300 persons,	1	–	–	–	–

City of Boston, Suffolk County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Es-tablish'ts.	Persons Employed in each Story.									Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.	
Employing 5 or less persons,	2,907	4,368	1,175	918	404	65	13	–	–	–	6,943
In one-story b'ld'gs,	1,930	4,289	–	–	–	–	–	–	–	–	4,289
In two-story b'ld'gs,	475	69	1,138	–	–	–	–	–	–	–	1,207
In three-story b'ld'gs,	340	4	32	899	–	–	–	–	–	–	935
In four-story b'ld'gs,	133	6	5	16	393	–	–	–	–	–	420
In five-story b'ld'gs,	25	–	–	1	11	64	–	–	–	–	76
In six-story b'ld'gs,	4	–	–	2	–	1	13	–	–	–	16
Employing 6 to 20 persons,	1,173	5,155	2,812	2,706	1,429	542	72	3	–	–	12,719
In one-story b'ld'gs,	427	4,231	–	–	–	–	–	–	–	–	4,231
In two-story b'ld'gs,	273	565	2,280	–	–	–	–	–	–	–	2,845
In three-story b'ld'gs,	243	184	351	2,305	–	–	–	–	–	–	2,840
In four-story b'ld'gs,	151	117	145	280	1,267	–	–	–	–	–	1,809
In five-story b'ld'gs,	66	38	27	103	144	517	–	–	–	–	829
In six-story b'ld'gs,	12	20	9	18	16	23	70	–	–	–	156
In seven-story b'ld'gs,	1	–	–	–	2	2	2	3	–	–	9
Employing 21 to 100 persons,	379	5,070	3,311	3,769	2,498	1,198	599	–	–	–	16,445
In one-story b'ld'gs,	55	2,237	–	–	–	–	–	–	–	–	2,237
In two-story b'ld'gs,	56	1,048	1,289	–	–	–	–	–	–	–	2,337
In three-story b'ld'gs,	109	1,112	954	2,480	–	–	–	–	–	–	4,546
In four-story b'ld'gs,	87	345	636	870	2,000	–	–	–	–	–	3,851
In five-story b'ld'gs,	51	263	340	389	440	896	–	–	–	–	2,328
In six-story b'ld'gs,	21	65	92	30	58	302	599	–	–	–	1,146
Employing 101 to 300 persons,	52	2,335	1,576	1,548	1,652	1,011	266	10	20	19	8,437
In one-story b'ld'gs,	1	140	–	–	–	–	–	–	–	–	140
In two-story b'ld'gs,	9	880	561	–	–	–	–	–	–	–	1,441
In three-story b'ld'gs,	6	432	195	193	–	–	–	–	–	–	820
In four-story b'ld'gs,	13	317	381	688	778	–	–	–	–	–	2,164
In five-story b'ld'gs,	14	338	248	473	474	770	–	–	–	–	2,303
In six-story b'ld'gs,	8	179	181	184	390	237	256	–	–	–	1,427
In nine-story b'ld'gs,	1	49	10	10	10	4	10	10	20	19	142
Employing over 300 persons,	5	1,040	48	8	463	540	134	–	–	–	2,233
In one-story b'ld'gs,	1	600	–	–	–	–	–	–	–	–	600
In two-story b'ld'gs,	1	440	10	–	–	–	–	–	–	–	450
In five-story b'ld'gs,	1	–	–	–	200	200	–	–	–	–	400
In six-story b'ld'gs,	2	–	38	8	263	340	134	–	–	–	783
Totals,	4,516	17,968	8,922	8,949	6,446	3,336	1,084	13	20	19	46,777

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—						
For 5 or less persons,	613 8 f. e.	35 1 f. e.	–	29 1 f. e.	–	2
For 6 to 20 persons,	334 11 f. e.	21	4	11	1 f. e.	5
For 21 to 100 persons,	51 12 f. e.	12	1	3	1	1
From third story—						
For 5 or less persons,	440 8 f. e.	20	–	2	–	–

Boston—Means of Escape in case of Fire.—Continued.

CLASSIFICATION.	MEANS OF ESCAPE.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From third story—Continued.						
For 6 to 20 persons,	183 / 14 f. e.	18	2	4	–	–
For 21 to 100 persons,	65 / 11 f. e.	9	1	–	1 / 1 f. e.	–
For 101 to 300 persons,	2	–	–	–	–	–
From fourth story—						
For 5 or less persons,	200 / 2 f. e.	14	–	–	–	–
For 6 to 20 persons,	148 / 13 f. e.	19	–	–	1 f. e.	–
For 21 to 100 persons,	55 / 7	6 / 2 f. e.	–	–	1	–
For 101 to 300 persons,	–	3	–	–	–	–
From fifth story—						
For 5 or less persons,	55 / 3 f. e.	2	–	–	–	–
For 6 to 20 persons,	42 / 7 f. e.	14 / 1 f. e.	–	–	1	–
For 21 to 100 persons,	29 / 1 f. e.	3 / 1 f. e.	–	–	1 f. e.	–
For 101 to 300 persons,	3	1	–	–	–	–
From sixth story—						
For 5 or less persons,	9 / 2 f. e.	2	–	–	–	–
For 6 to 20 persons,	11 / 2 f. e.	–	–	–	–	–
For 21 to 100 persons,	12 / 2 f. e.	1	1	–	1 f. e.	–
For 101 to 300 persons,	–	1	–	–	–	–
From seventh story—						
For 5 or less persons,	–	1	–	–	–	–
For 6 to 20 persons,	1	–	–	–	–	–
From eighth story—						
For 6 to 20 persons,	1	–	–	–	–	–
From ninth story—						
For 6 to 20 persons,	1	–	–	–	–	–

CITY OF CHELSEA, SUFFOLK COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.				Totals.
		1st.	2d.	3d.	4th.	
Employing 5 or less persons,	76	166	43	3	–	212
In one-story buildings,	62	162	–	–	–	162
In two-story buildings,	13	4	43	–	–	47
In three-story buildings,	1	–	–	3	–	3
Employing 6 to 20 persons,	49	323	60	18	–	401
In one-story buildings,	25	220	–	–	–	220
In two-story buildings,	20	99	51	–	–	150
In three-story buildings,	4	4	9	18	–	31
Employing 21 to 100 persons,	13	364	86	81	1	532
In one-story buildings,	4	169	–	–	–	169
In two-story buildings,	4	151	40	–	–	191
In three-story buildings,	4	43	44	50	–	137
In four-story buildings,	1	1	2	31	1	35
Employing 101 to 300 persons,	3	256	153	115	48	572
In two-story buildings,	1	46	63	–	–	109
In four-story buildings,	2	210	90	115	48	463
Totals,	141	1,109	342	217	49	1,717

Chelsea—Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.					
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—						
For 5 or less persons,	23	3	–	1	–	–
For 6 to 20 persons,	16	–	–	1	–	1
For 21 to 100 persons,	1	–	–	–	1 f. e.	1
From third story—						
For 5 or less persons,	3	–	1	–	–	–
For 6 to 20 persons,	5	–	–	–	–	–
For 21 to 100 persons,	–	1	–	–	1 f. e.	1
From fourth story—						
For 5 or less persons,	–	1	–	–	–	–
For 21 to 100 persons,	–	–	–	–	1 f. e.	1

CITY OF FITCHBURG, WORCESTER COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.				Totals.
		1st.	2d.	3d.	4th.	
Employing 5 or less persons,	95	189	47	10	–	246
In one story buildings,	76	182	–	–	–	182
In two-story buildings,	15	7	47	–	–	54
In three-story buildings,	4	–	–	10	–	10
Employing 6 to 20 persons,	33	223	82	21	–	326
In one-story buildings,	20	194	–	–	–	194
In two-story buildings,	8	32	64	–	–	96
In three-story buildings,	5	7	18	21	–	46
Employing 21 to 100 persons,	26	516	366	264	42	1,188
In one-story buildings,	3	165	–	–	–	165
In two-story buildings,	5	109	26	–	–	135
In three-story buildings,	15	175	284	213	–	672
In four-story buildings,	3	67	56	51	42	216
Employing 101 to 300 persons,	4	533	212	30	–	775
In two-story buildings,	3	453	172	–	–	625
In three-story buildings,	1	80	40	30	–	150
Totals,	158	1,471	707	325	42	2,545

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.			
	One inside stairway	Two inside stairways.	Outside stairway.	Inside and outside stairways.
From second story—				
For 5 or less persons,	19 1 f. e.	–	2	1
For 6 to 20 persons	15 1 f. e.	4	–	–
For 21 to 100 persons,	7 1 f. e.	2	–	–

Fitchburg—Means of Escape in case of Fire—Continued.

CLASSIFICATION.	MEANS OF ESCAPE.			
	One inside stairway.	Two inside stairways.	Outside stairway.	Inside and outside stairways.
From third story—				
For 5 or less persons,	14	2	–	–
For 6 to 20 persons,	6 1 f. e.	–	–	–
For 21 to 100 persons,	3 2 f. e.	2	–	–
From fourth story—				
For 6 to 20 persons,	1 1 f. e.	–	–	–
For 21 to 100 persons,	1 1 f. e.	–	–	–

CITY OF WORCESTER, WORCESTER COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 5 or less persons,	313	411	203	149	42	5	–	810
In one-story buildings,	178	391	–	–	–	–	–	391
In two-story buildings,	66	8	167	–	–	–	–	175
In three-story buildings,	53	12	36	148	–	–	–	196
In four-story buildings,	15	–	–	1	42	–	–	43
In five-story buildings,	1	–	–	–	–	5	–	5
Employing 6 to 20 persons,	118	604	322	244	135	11	–	1,316
In one-story buildings,	37	396	–	–	–	–	–	396
In two-story buildings,	32	129	228	–	–	–	–	357
In three-story buildings,	34	51	79	240	–	–	–	370
In four-story buildings,	11	6	15	4	114	–	–	139
In five-story buildings,	4	22	–	–	21	11	–	54
Employing 21 to 100 persons,	81	1,397	964	938	381	90	–	3,770
In one-story buildings,	8	252	–	–	–	–	–	252
In two-story buildings,	12	211	169	–	–	–	–	380
In three-story buildings,	26	560	366	435	–	–	–	1,361
In four-story buildings,	25	329	355	355	323	–	–	1,362
In five-story buildings,	10	45	74	148	58	90	–	415
Employing 101 to 300 persons,	15	809	373	625	447	260	–	2,514
In one-story buildings,	1	280	–	–	–	–	–	280
In three-story buildings,	1	130	69	38	–	–	–	237
In four-story buildings,	5	202	94	224	233	–	–	753
In five-story buildings,	7	180	210	363	214	127	–	1,094
In six-story buildings,	1	17	–	–	–	133	–	150
Employing over 300 persons,	1	296	170	89	41	86	–	682
In five-story buildings,	1	296	170	89	41	86	–	682
Totals,	528	3,517	2,032	2,045	1,046	452	–	9,092

Worcester—Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.				
	One inside stairway.	Two inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—					
For 5 or less persons,	72	3	10	-	1
For 6 to 20 persons,	41	11	3	2 f. e.	6
For 21 to 100 persons,	18 4 f. e.	2	1	2 f. e.	1
For 101 to 300 persons,	1	-	-	-	1
From third story—					
For 5 or less persons,	67	8	-	1 f. e.	-
For 6 to 20 persons,	38 2 f. e.	9	-	3	1
For 21 to 100 persons,	19 2 f. e.	5	1	3 f. e.	-
For 101 to 300 persons,	1 f. e.	-	-	-	-
From fourth story—					
For 5 or less persons,	22	2	-	1	1
For 6 to 20 persons,	21 1 f. e.	1	-	2 f. e.	-
For 21 to 100 persons,	10 1 f. e.	2	-	2 f. e.	-
From fifth story—					
For 5 or less persons,	3	1	-	-	1
For 6 to 20 persons,	3	-	-	-	-
For 21 to 100 persons,	4 2 f. e.	1	-	-	-
For 101 to 300 persons,	-	2	-	-	-

In the city presentations, which we have just concluded, every establishment for which returns were made is accounted for. In the town presentations which follow, in many cases, we have only taken into consideration the principal establishments, rejecting those in which less than five persons were employed in one-story buildings, and in similar unimportant instances. The construction, nature of facts contained, and use of the tables, are precisely the same as in the city showings.

TOWN OF ADAMS, BERKSHIRE COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY. 1st.	2d.	3d.	4th.	5th.	Totals.
Employing 5 or less persons,	63	145	17	6	–	–	168
In one-story buildings,	53	134	–	–	–	–	134
In two-story buildings,	8	11	17	–	–	–	28
In three-story buildings,	2	–	–	6	–	–	6
Employing 6 to 20 persons,	29	159	113	22	–	–	294
In one-story buildings,	7	70	–	–	–	–	70
In two-story buildings,	17	83	96	–	–	–	179
In three-story buildings,	5	6	17	22	–	–	45
Employing 21 to 100 persons,	13	223	344	162	28	–	757
In two-story buildings,	3	76	32	–	–	–	108
In three-story buildings,	8	135	260	147	–	–	542
In four-story buildings,	2	12	52	15	28	–	107
Employing 101 to 300 persons,	12	655	850	360	132	3	2,000
In three-story buildings,	5	319	402	156	–	–	877
In four-story buildings,	6	299	367	173	114	–	953
In five-story buildings,	1	37	81	31	18	3	170
Employing over 300 persons,	2	255	330	250	210	–	1,045
In four-story buildings,	2	255	330	250	210	–	1,045
Totals,	119	1,437	1,654	800	370	3	4,264

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE. One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.	Tower stairways.
From second story—					
For 5 or less persons,	24	–	–	1	2
For 6 to 20 persons,	13	–	–	–	–
For 21 to 100 persons,	5 3 f. e.	2	–	2	5 1 f. e.
For 101 to 300 persons,	1 f. e.	1	1 f. e.	–	1 f. e.
From third story—					
For 5 or less persons,	4 1 f. e.	2	–	–	1
For 6 to 20 persons,	6 2 f. e.	2	–	1	2
For 21 to 100 persons,	5	–	2 f. e.	–	2 f. e.
For 101 to 300 persons,	–	–	–	–	1 f. e.
From fourth story—					
For 6 to 20 persons,	1 1 f. e.	1	–	2 f. e. 1	1
For 21 to 100 persons,	–	1	1 f. e.	–	1 f. e
For 101 to 300 persons,	–	–	–	–	1
From fifth story—					
For 5 or less persons,	–	–	–	–	1 f. e

TOWN OF PITTSFIELD, BERKSHIRE COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 5 or less persons,	102	186	50	22	–	–	258
In one-story buildings,	80	178	–	–	–	–	178
In two-story buildings,	14	8	45	–	–	–	53
In three-story buildings,	8	–	5	22	–	–	27
Employing 6 to 20 persons,	32	174	141	24	–	–	339
In one-story buildings,	13	127	–	–	–	–	127
In two-story buildings,	14	35	116	–	–	–	151
In three-story buildings,	5	12	25	24	–	–	61
Employing 21 to 100 persons,	9	147	105	55	–	–	307
In one-story buildings,	2	63	–	–	–	–	63
In two-story buildings,	4	54	66	–	–	–	120
In three-story buildings,	3	30	39	55	–	–	124
Employing 101 to 300 persons,	5	229	227	140	87	4	687
In three-story buildings,	1	88	36	14	–	–	138
In four-story buildings,	3	99	172	76	73	–	420
In five-story buildings,	1	42	19	50	14	4	129
Totals,	148	736	523	241	87	4	1,591

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.			
	One inside stairway.	Three inside stairways.	Outside stairway.	Tower stairways.
From second story—				
For 5 or less persons,	21	–	–	–
For 6 to 20 persons,	20	–	1	–
For 21 to 100 persons,	2 f. e.	1 f. e.	–	2 f. e.
From third story—				
For 5 or less persons,	11 1 f. e.	–	–	–
For 6 to 20 persons,	3	–	–	2 f. e.
For 21 to 100 persons,	2 f. e. 1	–	–	1 f. e.
From fourth story—				
For 5 or less persons,	1	–	–	–
For 6 to 20 persons,	1 f. e.	–	–	–
For 21 to 100 persons,	1	–	–	1 f. e.
From fifth story—				
For 5 or less persons,	1	–	–	–

TOWN OF ATTLEBOROUGH, BRISTOL COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 5 or less persons,	6	13	3	5	–	–	21
In one-story buildings,	3	11	–	–	–	–	11
In two-story buildings,	2	2	3	–	–	–	5
In three-story buildings,	1	–	–	5	–	–	5
Employing 6 to 20 persons,	15	73	78	20	–	–	171
In one-story buildings,	6	60	–	–	–	–	60
In two-story buildings,	8	13	78	–	–	–	91
In three-story buildings,	1	–	–	20	–	–	20
Employing 21 to 100 persons,	17	229	313	132	10	6	690
In two-story buildings,	10	125	275	–	–	–	400
In three-story buildings,	6	100	12	110	–	–	222
In five-story buildings,	1	4	26	22	10	6	68
Employing 101 to 300 persons,	3	125	77	88	36	33	359
In one-story buildings,	1	125	–	–	–	–	125
In three-story buildings,	1	–	60	65	–	–	125
In five-story buildings,	1	–	17	23	36	33	109
Totals,	41	440	471	245	46	39	1,241

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.				
	One inside stairway.	Two inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—					
For 5 or less persons,	3	–	–	–	–
For 6 to 20 persons,	6 1 f. e.	–	2	1	–
For 21 to 100 persons,	5	1	–	2 f. e.	1 f. e.
From third story—					
For 5 or less persons,	1	–	–	–	1
For 6 to 20 persons,	–	–	–	1 f. e.	–
For 21 to 100 persons,	2 1 f. e.	–	–	1 1 f. e.	1
From fourth story—					
For 6 to 20 persons,	1	–	–	1 f. e.	–
For 21 to 100 persons,	1 f. e.	–	–	–	–
From fifth story—					
For 6 to 20 persons,	–	–	–	1 f. e.	–
For 21 to 100 persons,	1 f. e.	–	–	–	–

Town of Beverly, Essex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.				Totals.
		1st.	2d.	3d.	4th.	
Employing 6 to 20 persons,	9	58	33	10	–	101
In one-story buildings,	3	40	–	–	–	40
In two-story buildings,	3	15	22	–	–	37
In three-story buildings,	3	3	11	10	–	24
Employing 21 to 100 persons,	16	127	367	324	40	858
In two-story buildings,	4	45	98	–	–	143
In three-story buildings,	10	66	243	284	–	593
In four-story buildings,	2	16	26	40	40	122
Employing 101 to 300 persons,	1	10	15	75	50	150
In four-story buildings,	1	10	15	75	50	150
Totals,	26	195	415	409	90	1,109

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.		
	One inside stairway.	Outside stairway.	Inside and outside stairways.
From second story—			
For 5 or less persons,	3	–	–
For 6 to 20 persons,	9	1	2
For 21 to 100 persons,	7	–	–
From third story—			
For 5 or less persons,	1	–	–
For 6 to 20 persons,	6	1	–
For 21 to 100 persons,	8	–	–
From fourth story—			
For 6 to 20 persons,	1	–	–
For 21 to 100 persons,	2	–	–

Town of Marblehead, Essex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.				Totals.
		1st.	2d.	3d.	4th.	
Employing 6 to 20 persons,	13	7	160	9	–	176
In two-story buildings,	12	4	152	–	–	156
In three-story buildings,	1	3	8	9	–	20
Employing 21 to 100 persons,	14	22	206	422	170	820
In two-story buildings,	4	–	150	–	–	150
In three story buildings,	9	22	36	359	–	417
In four-story buildings,	1	–	20	63	170	253
Employing 101 to 300 persons,	1	45	88	97	117	347
In four-story buildings,	1	45	88	97	117	347
Totals,	28	74	454	528	287	1,343

Marblehead—Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.		
	One inside stairway.	Two inside stairways.	Three inside stairways.
From second story—			
For 6 to 20 persons,	17	–	–
For 21 to 100 persons,	6	–	–
From third story—			
For 6 to 20 persons,	2	–	–
For 21 to 100 persons,	8	2	1
From fourth story—			
For 21 to 100 persons,	3	2	–

TOWN OF NORTH ANDOVER, ESSEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 21 to 100 persons,	3	56	77	59	57	5	254
In four-story buildings,	2	40	44	50	43	–	177
In five-story buildings,	1	16	33	9	14	5	77
Employing over 300 persons,	1	200	150	120	50	–	520
In four-story buildings,	1	200	150	120	50	–	520
Totals,	4	256	227	179	107	5	774

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.	
	One inside stairway.	Tower stairways.
From second story—		
For 6 to 20 persons,	–	1 f. e.
For 21 to 100 persons,	1 f. e.	1 f. e.
For 101 to 300 persons,	1 f. e.	–
From third story—		
For 6 to 20 persons,	1 f. e.	1 f. e.
For 21 to 100 persons,	–	1 f. e.
For 101 to 300 persons,	2 f. e.	–
From fourth story—		
For 6 to 20 persons,	1 f. e.	1 f. e.
For 21 to 100 persons,	1 f. e.	1 f. e.
From fifth story—		
For 5 or less persons,	1 f. e.	–

TOWN OF CHICOPEE, HAMPDEN COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establ'ts.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 21 to 100 persons,	5	98	74	76	11	–	259
In two-story buildings,	1	33	17	–	–	–	50
In three-story buildings,	2	43	30	47	–	–	120
In four-story buildings,	2	22	27	29	11	–	89
Employing 101 to 300 persons,	1	130	70	75	–	–	275
In three-story buildings,	1	130	70	75	–	–	275
Employing over 300 persons,	2	527	782	443	330	314	2,396
In five-story buildings,	2	527	782	443	330	314	2,396
Totals,	8	755	926	594	341	314	2,930

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.						
	One inside stairway.	Two inside stairways.	Three inside stairways.	Five inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—							
For 5 or less persons,	–	1	–	–	–	–	–
For 6 to 20 persons,	1 f. e.	–	1 f. e.	–	–	–	1
For 21 to 100 persons,	–	1 f. e.	–	–	1 f. e.	–	–
For over 300 persons,	–	–	1 f. e.	1 f. e.	–	–	–
From third story—							
For 6 to 20 persons,	1 f. e.	1	–	–	–	–	1
For 21 to 100 persons,	–	1 f. e.	–	–	–	1 f. e.	–
For 101 to 300 persons,	–	–	1 f. e.	–	–	–	–
For over 300 persons,	–	–	–	1 f. e.	–	–	–
From fourth story—							
For 5 or less persons,	–	1	–	–	–	–	–
For 6 to 20 persons,	1 f. e.	–	–	–	–	–	–
For 101 to 300 persons,	–	–	–	1 f. e.	–	2 f. e.	–
From fifth story—							
For 21 to 100 persons,	–	–	1 f. e.	1 f. e.	–	–	–

TOWN OF NORTHAMPTON, HAMPSHIRE COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establ'ts.	PERSONS EMPLOYED IN EACH STORY.				Totals.
		1st.	2d.	3d.	4th.	
Employing 21 to 100 persons,	4	113	131	37	23	304
In two-story buildings,	2	66	84	–	–	150
In four story buildings,	2	47	47	37	23	154
Employing 101 to 300 persons,	3	223	215	20	–	458
In two-story buildings,	2	143	175	–	–	318
In three-story buildings,	1	80	40	20	–	140
Totals,	7	336	346	57	23	762

Northampton—Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.		
	One inside stairway.	Two inside stairways.	Tower stairways.
From second story—			
For 6 to 20 persons,	–	–	1
For 21 to 100 persons,	1 (1 f. e.)	1	1 (2 f. e.)
From third story—			
For 6 to 20 persons,	–	1	1 f. e.
For 21 to 100 persons,	–	–	1
From fourth story—			
For 6 to 20 persons,	–	–	1 (1 f. e.)

TOWN OF MALDEN, MIDDLESEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.				Totals.
		1st.	2d.	3d.	4th.	
Employing 6 to 20 persons,	5	41	27	4	–	72
In one-story buildings,	1	14	–	–	–	14
In two-story buildings,	3	15	24	–	–	39
In three-story buildings,	1	12	3	4	–	19
Employing 21 to 100 persons,	3	77	68	31	25	201
In three-story buildings,	2	17	28	6	–	51
In four-story buildings,	1	60	40	25	25	150
Employing over 300 persons,	1	107	87	339	6	539
In four-story buildings,	1	107	87	339	6	539
Totals,	9	225	182	374	31	812

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.		
	One inside stairway.	Two inside stairways.	Inside and outside stairways.
From second story—			
For 5 or less persons,	1 f. e.	–	–
For 6 to 20 persons,	5	–	–
For 21 to 100 persons,	–	1	1 f. e.
From third story—			
For 5 or less persons,	2 (1 f. e.)	–	–
For 21 to 100 persons,	–	–	1 f. e.
For over 300 persons,	–	1	–
From fourth story—			
For 6 to 20 persons,	–	1	–
For 21 to 100 persons,	–	–	1 f. e.

Town of Marlborough, Middlesex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 6 to 20 persons,	1	10	8	–	–	–	18
In two-story buildings,	1	10	8	–	–	–	18
Employing 21 to 100 persons,	4	90	70	85	10	–	255
In three-story buildings,	3	55	55	60	–	–	170
In four-story buildings,	1	35	15	25	10	–	85
Employing 101 to 300 persons,	11	223	482	535	303	25	1,568
In four-story buildings,	9	192	387	480	234	–	1,293
In five-story buildings,	2	31	95	55	69	25	275
Employing over 300 persons,	1	61	168	159	31	71	490
In five-story buildings,	1	61	168	159	31	71	490
Totals,	17	384	728	779	344	96	2,331

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.			
	One inside stairway.	Two inside stairways.	Three inside stairways.	Outside stairway.
From second story—				
For 6 to 20 persons,	2	2	–	1 f. e.
For 21 to 100 persons,	8	2	1	–
For 101 to 300 persons,	–	1	–	–
From third story—				
For 6 to 20 persons,	2	1	–	–
For 21 to 100 persons,	8	3	–	1
For 101 to 300 persons,	–	1	–	–
From fourth story—				
For 6 to 20 persons,	3 1 f. e.	1	–	–
For 21 to 100 persons,	5	3	–	–
From fifth story—				
For 6 to 20 persons,	1	–	–	–
For 21 to 100 persons,	–	1	–	–

Town of Natick, Middlesex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.				Totals.
		1st.	2d.	3d.	4th.	
Employing 6 to 20 persons,	6	35	37	18	8	98
In two-story buildings,	3	30	24	–	–	54
In three-story buildings,	2	2	7	16	–	25
In four-story buildings,	1	3	6	2	8	19
Employing 21 to 100 persons,	7	99	148	135	79	461
In two-story buildings,	1	40	37	–	–	77
In three-story buildings,	2	23	45	42	–	110
In four-story buildings,	4	36	66	93	79	274
Employing 101 to 300 persons,	1	27	42	38	10	117
In four-story buildings,	1	27	42	38	10	117
Totals,	14	161	227	191	97	676

Natick—Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.	
	One inside stairway.	Outside stairway.
From second story—		
For 6 to 20 persons,	7	1
For 21 to 100 persons,	4	–
From third story—		
For 5 or less persons,	2	–
For 6 to 20 persons,	3 (1 f. e.)	–
For 21 to 100 persons,	4	–
From fourth story—		
For 6 to 20 persons,	5	–
For 21 to 100 persons,	1	–

TOWN OF STONEHAM, MIDDLESEX COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	PERSONS EMPLOYED IN EACH STORY.				Totals.
		1st.	2d.	3d.	4th.	
Employing 6 to 20 persons,	6	20	21	27	20	88
In two-story buildings,	1	2	5	–	–	7
In three-story buildings,	4	18	16	27	–	61
In four-story buildings,	1	–	–	–	20	20
Employing 21 to 100 persons,	15	133	189	197	127	646
In one-story buildings,	1	25	–	–	–	25
In three-story buildings,	6	68	141	50	–	259
In four-story buildings,	8	40	48	147	127	362
Employing 101 to 300 persons,	4	87	96	229	158	570
In three-story buildings,	1	50	25	100	–	175
In four-story buildings,	3	37	71	129	158	395
Totals,	25	240	306	453	305	1,304

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.		
	One inside stairway.	Outside stairway.	Inside and outside stairways.
From second story—			
For 5 or less persons,	5	1	–
For 6 to 20 persons,	6	1	2
For 21 to 100 persons,	4	2	1
From third story—			
For 5 or less persons,	3	1	–
For 6 to 20 persons,	7	–	–
For 21 to 100 persons,	1	–	–
From fourth story—			
For 6 to 20 persons,	6	–	–
For 21 to 100 persons,	6	–	–

Town of Waltham, Middlesex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 6 to 20 persons,	5	32	37	–	–	–	69
In one-story buildings,	1	20	–	–	–	–	20
In two-story buildings,	4	12	37	–	–	–	49
Employing 101 to 300 persons,	1	80	80	35	–	–	195
In three-story buildings,	1	80	80	35	–	–	195
Employing over 300 persons,	2	796	562	250	123	23	1,754
In three-story buildings,	1	350	300	100	–	–	750
In five-story buildings,	1	446	262	150	123	23	1,004
Totals,	8	908	679	285	123	23	2,018

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.				
	One inside stairway.	Three inside stairways.	Outside stairway.	Tower stairways.	Inside and outside stairways.
From second story—					
For 6 to 20 persons,	2	–	1	–	1
For 21 to 100 persons,	–	3	–	1	–
For 101 to 300 persons,	1 f. e.	–	–	1	–
From third story—					
For 21 to 100 persons,	3	–	–	1	–
For 101 to 300 persons,	1 f. e.	–	–	1 f. e.	–
From fourth story—					
For 101 to 300 persons,	1 f. e.	–	–	1	–
From fifth story—					
For 21 to 100 persons,	1 f. e.	–	–	1 f. e.	–

Town of Woburn, Middlesex County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 6 to 20 persons,	10	57	47	16	2	–	122
In one-story buildings,	1	17	–	–	–	–	17
In two-story buildings,	3	21	17	–	–	–	38
In three-story buildings,	5	16	27	14	–	–	57
In four-story buildings,	1	3	3	2	2	–	10
Employing 21 to 100 persons,	17	213	270	183	27	–	693
In two-story buildings,	4	43	78	–	–	–	121
In three-story buildings,	6	59	115	77	–	–	251
In four-story buildings,	7	111	77	106	27	–	321
Employing 101 to 300 persons,	2	35	55	170	12	30	302
In five-story buildings,	2	35	55	170	12	30	302
Totals,	29	305	372	369	41	30	1,117

Woburn—Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.		
	One inside stairway.	Two inside stairways.	Outside stairway.
From second story—			
For 5 or less persons,	3	1	1
For 6 to 20 persons,	13 (2 f. e.)	3	-
For 21 to 100 persons,	3	2	-
From third story—			
For 5 or less persons,	7	2	-
For 6 to 20 persons,	5 (1 f. e.)	3	-
For 21 to 100 persons,	1	1	-
For 101 to 300 persons,	1	-	-
From fourth story—			
For 5 or less persons,	7	1	-
For 6 to 20 persons,	-	1	-
For 21 to 100 persons,	1	-	-
From fifth story—			
For 6 to 20 persons,	1	1	-

TOWN OF WEYMOUTH, NORFOLK COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 6 to 20 persons,	16	48	119	42	-	-	209
In two-story buildings,	8	26	73	-	-	-	99
In three-story buildings,	8	22	46	42	-	-	110
Employing 21 to 100 persons,	21	134	291	228	139	10	802
In two-story buildings,	4	21	76	-	-	-	97
In three-story buildings,	9	75	138	123	-	-	336
In four-story buildings,	7	36	75	99	119	-	329
In five-story buildings,	1	2	2	6	20	10	40
Employing 101 to 300 persons,	4	244	86	90	122	-	542
In one-story buildings,	1	191	-	-	-	-	191
In four-story buildings,	3	53	86	90	122	-	351
Totals,	41	426	496	360	261	10	1,558

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.	
	One inside stairway.	Two inside stairways.
From second story—		
For 5 or less persons,	4	-
For 6 to 20 persons,	27	1
For 21 to 100 persons,	6 (1 f. e.)	-
From third story—		
For 5 or less persons,	9	-
For 6 to 20 persons,	15	-
For 21 to 100 persons,	4 (1 f. e.)	-
From fourth story—		
For 5 or less persons,	3	-
For 6 to 20 persons,	4	-
For 21 to 100 persons,	4	1
From fifth story—		
For 6 to 20 persons,	1	-

Town of Brockton, Plymouth County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 6 to 20 persons,	6	30	32	7	15	–	84
In two-story buildings,	2	15	13	–	–	–	28
In three-story buildings,	1	6	4	1	–	–	11
In four-story buildings,	3	9	15	6	15	–	45
Employing 21 to 100 persons,	26	302	300	406	264	–	1,272
In two-story buildings,	2	21	33	–	–	–	54
In three-story buildings,	11	165	153	211	–	–	529
In four-story buildings,	13	116	114	195	264	–	689
Employing 101 to 300 persons,	5	197	106	284	273	–	860
In four-story buildings,	5	197	106	284	273	–	860
Employing over 300 persons,	1	30	–	100	85	160	375
In five-story buildings,	1	30	–	100	85	160	375
Totals,	38	559	438	797	637	160	2,591

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.			
	One inside stairway.	Two inside stairways.	Outside stairway.	Inside and outside stairways.
From second story—				
For 5 or less persons,	8 (1 f. e.)	–	–	–
For 6 to 20 persons,	15	–	2	4
For 21 to 100 persons,	2	–	–	3
From third story—				
For 5 or less persons,	3	–	–	2
For 6 to 20 persons,	18	3	–	–
For 21 to 100 persons,	5 (1 f. e.)	–	–	–
From fourth story—				
For 5 or less persons,	2	–	–	–
For 6 to 20 persons,	11	–	–	–
For 21 to 100 persons,	8 (1 f. e.)	–	–	–
From fifth story—				
For 101 to 300 persons,	1	–	–	–

Town of Blackstone, Worcester County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establish'ts.	Persons Employed in each Story.						Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	
Employing 6 to 20 persons,	3	25	15	8	–	–	–	48
In two-story buildings,	2	25	10	–	–	–	–	35
In three-story buildings,	1	–	5	8	–	–	–	13
Employing 21 to 100 persons,	3	30	55	10	5	–	–	100
In two-story buildings,	1	10	20	–	–	–	–	30
In three story buildings,	1	15	7	2	–	–	–	24
In four-story buildings,	1	5	28	8	5	–	–	46
Employing 101 to 300 persons,	2	139	156	41	32	–	–	368
In four-story buildings,	2	139	156	41	32	–	–	368
Employing over 300 persons,	1	83	213	135	123	123	106	783
In six-story buildings,	1	83	213	135	123	123	106	783
Totals,	9	277	439	194	160	123	106	1,299

Blackstone—Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.	
	One inside stairway.	Tower stairways.
From second story—		
For 5 or less persons,	3	–
For 6 to 20 persons,	2	–
For 21 to 100 persons,	1 f. e.	–
For 101 to 300 persons,	1 f. e.	1 f. e.
From third story—		
For 5 or less persons,	1	–
For 6 to 20 persons,	2 and 1 f. e.	–
For 21 to 100 persons,	1 f. e.	–
For 101 to 300 persons,	–	1 f. e.
From fourth story—		
For 5 or less persons,	1	–
For 6 to 20 persons,	1 f. e.	–
For 21 to 100 persons,	1 f. e.	–
For 101 to 300 persons,	–	1 f. e.
From fifth story—		
For 101 to 300 persons,	–	1 f. e.
From sixth story—.		
For 101 to 300 persons,	–	1 f. e.

TOWN OF MILFORD, WORCESTER COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establ'ts.	PERSONS EMPLOYED IN EACH STORY.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 6 to 20 persons,	10	31	45	36	19	–	131
In one-story buildings,	1	8	–	–	–	–	8
In two-story buildings,	2	10	22	–	–	–	32
In three-story buildings,	3	5	10	21	–	–	36
In four-story buildings,	4	8	13	15	19	–	55
Employing 21 to 100 persons,	13	185	135	98	67	–	485
In two-story buildings,	4	81	29	–	–	–	110
In three-story buildings,	3	61	28	41	–	–	130
In four-story buildings,	6	43	78	57	67	–	245
Employing 101 to 300 persons,	5	106	146	98	209	129	688
In four-story buildings,	1	10	20	8	70	–	108
In five-story buildings,	4	96	126	90	139	129	580
Totals,	28	322	326	232	295	129	1,304

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.			
	One inside stairway.	Two inside stairways.	Outside stairway.	Inside and outside stairways.
From second story—				
For 5 or less persons,	7	–	2	–
For 6 to 20 persons,	6	3	–	3
For 21 to 100 persons,	1 f. e.	1	1	1
From third story—				
For 5 or less persons,	8	–	–	–

Milford—Means of Escape in case of Fire—Continued.

CLASSIFICATION.	MEANS OF ESCAPE.			
	One inside stairway.	Two inside stairways.	Outside stairway.	Inside and outside stairways.
From third story—Con.				
For 6 to 20 persons,	9	2 f. e. 1	–	–
For 21 to 100 persons,	1 f. e.	1	–	–
From fourth story—				
For 5 or less persons,	5	–	–	–
For 6 to 20 persons,	4	–	–	–
For 21 to 100 persons,	5	1	–	–
From fifth story—				
For 6 to 20 persons,	1	–	–	–
For 21 to 100 persons,	2	1	–	–

TOWN OF MILLBURY, WORCESTER COUNTY.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	PERSONS EMPLOYED IN EACH STORY.				Totals.
		1st.	2d.	3d.	4th.	
Employing 21 to 100 persons,	8	212	181	89	53	535
In two-story buildings,	1	60	40	–	–	100
In three-story buildings,	2	75	25	15	–	115
In four-story buildings,	5	77	116	74	53	320
Employing 101 to 300 persons,	5	207	220	106	50	583
In four-story buildings,	5	207	220	106	50	583
Totals,	13	419	401	195	103	1,118

Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.		
	One inside stairway.	Two inside stairways.	Tower stairways.
From second story—			
For 6 to 20 persons,	1 1 f. e.	–	2 f. e.
For 21 to 100 persons,	1	1 f. e.	7 f. e.
From third story—			
For 6 to 20 persons,	1 1 f. e.	1 f. e.	6 f. e.
For 21 to 100 persons,	–	–	8 f. e
From fourth story—			
For 5 or less persons,	–	–	3
For 6 to 20 persons,	1 f. e.	1 f. e.	5 f. e.

Town of Southbridge, Worcester County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	Persons Employed in each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 21 to 100 persons,	2	65	51	–	–	–	116
In two-story buildings,	2	65	51	–	–	–	116
Employing 101 to 300 persons,	4	269	282	138	27	–	716
In two-story buildings,	1	84	46	–	–	–	130
In three-story buildings,	1	19	44	70	–	–	133
In four-story buildings,	2	166	192	68	27	–	453
Employing over 300 persons,	1	186	217	223	124	59	809
In five-story buildings,	1	186	217	223	124	59	809
Totals,	7	520	550	361	151	59	1,641

Means of Escape in case of Fire.

CLASSIFICATION.	Means of Escape.		
	One inside stairway.	Two inside stairways.	Tower stairways.
From second story—			
For 6 to 20 persons,	–	1	–
For 21 to 100 persons,	1 1 f. e.	1 f. e.	1 f. e.
For 101 to 300 persons,	1 f. e.	–	1 f. e.
From third story—			
For 5 or less persons,	–	1	–
For 21 to 100 persons,	1 f. e.	–	1 f. e.
For 101 to 300 persons,	–	–	1 f. e.
From fourth story—			
For 5 or less persons,	1 f. e.	–	–
For 21 to 100 persons,	1 f. e.	–	–
For 101 to 300 persons,	1 f. e.	–	–
From fifth story—			
For 21 to 100 persons,	–	–	1 f. e.

Town of Westborough, Worcester County.

Persons Employed in each Story.

CLASSIFICATION.	No. of Establishments.	Persons Employed in Each Story.					Totals.
		1st.	2d.	3d.	4th.	5th.	
Employing 6 to 20 persons,	1	5	5	5	–	–	15
In three-story buildings,	1	5	5	5	–	–	15
Employing 21 to 100 persons,	1	8	20	40	–	–	68
In three-story buildings,	1	8	20	40	–	–	68
Employing 101 to 300 persons,	2	49	70	85	100	12	316
In three-story buildings,	1	25	40	55	–	–	120
In five-story buildings,	1	24	30	30	100	12	196
Employing over 300 persons,	1	90	70	170	160	32	522
In five-story buildings,	1	90	70	170	160	32	522
Totals,	5	152	165	300	260	44	921

Westborough—Means of Escape in case of Fire.

CLASSIFICATION.	MEANS OF ESCAPE.		
	One inside stairway.	Outside stairways.	Tower stairways.
From second story—			
For 5 or less persons,	1	–	–
For 6 to 20 persons,	1	–	–
For 21 to 100 persons,	1	1	1
From third story—			
For 5 or less persons,	1	–	–
For 21 to 100 persons,	3	–	–
For 101 to 300 persons,	–	–	1
From fourth story—			
For 21 to 100 persons,	1	–	–
For 101 to 300 persons,	–	–	1
From fifth story—			
For 6 to 20 persons,	1	–	–
For 21 to 100 persons,	–	–	1

NOTES ON THE PRECEDING TABLES.

FALL RIVER (page 234). The whole number of establishments tabulated, is 241. The number of these employing 21 persons and upwards, is 59, divided among the following industries:—Cotton goods, 38; machinery, 3; woollen goods, 1; iron work, 5; blacksmithing, 1; bleaching and finishing, 1; carpentry and joinery, 2; roll covering, 1; masoning, 2; loom harnesses, 2; repairing top-rolls, 1; clothing, 2. The whole number of persons employed, is 16,594. The 59 establishments mentioned as having 21 or more workmen, employ 15,657 of these. The number of persons employed in third stories and stories above the third, is 7,538, and they are engaged in the following kinds of work:—Clothing, carriages, carpentry, butchering, tinsmithing, roll-covering, loom harnesses, card clothing, leather belting, job printing, cotton goods, machinery, bleaching and finishing, iron goods, woollen goods.

NEW BEDFORD (page 235). The whole number of establishments tabulated, is 242. The number of these employing 21 persons and upwards, is 27, divided among the following industries:—Ship building and repairing, 2; railroad cars, 1; iron goods, 2; rolled metal, 1; tin and sheet iron ware, 1; sperm and whale oil, 2; food preparations, 2; carriages, 2; sails, 1; leather, 2; newspapers, 1; clothing, 1; boots and shoes, 2; picture frames, 2; rope and cordage, 1; drills and chucks, 1; glass, 1; cotton goods, 2. The whole number of persons employed, is 4,642. The 27 establishments mentioned as having 21 or more workmen, employ 3,458 of these. The number of persons employed in third stories and stories above the third, is 1,586, and they are engaged in the following kinds of work:—Carriages, coffee and spices, tin and sheet iron ware, paraffine wax and candles, clothing, sperm and whale oil, sails, leather, newspapers, boots and shoes, picture frames, rope and cordage, drills and chucks, glass, cotton goods.

TAUNTON (page 236). The whole number of establishments tabulated, is 134. The number of these employing 21 persons and upward, is 21, divided among the following industries:—Bricks, 2; cotton goods, 4; iron goods, 8; britannia goods, 1; locomotives and machinery, 2; copper and yellow metal work, 1; silver-plated ware, 1; carpentry, 2. The whole number of persons employed, is 3,568. The 21 establishments mentioned as having 21 or more workmen, employ 2,826 of these. The number of persons employed in third stories and stories above the third, is 767, and they are engaged in the following kinds of work:—Painting, stove polish, clothing, iron goods, enamelled cloth, britannia ware, cotton goods, silver-plated ware, locomotives and machinery.

GLOUCESTER (page 237). The whole number of establishments tabulated, is 105. The number of these employing 21 persons and upward, is 5, divided among the following industries:—Stone cutting, 1; boats, 1; vessels, 1; oiled clothing, 2. The whole number of persons employed, is 671. The 5 establishments mentioned as having 21 or more workmen, employ 193 of these. The number of persons employed in third stories and stories above the third, is 22, and they are engaged in the following kinds of work:—Nets and seines, sails, tinware, oiled clothing, carpentry.

HAVERHILL (page 238). The whole number of establishments tabulated, is 317. The number of these employing 21 persons and upward, is 38, divided among the following industries:—Boots and shoes, 32; leather, 1; bonnets and hats, 1; shoe bows, 1; flannels, 1; wool hats, 2. The whole number of persons employed, is 3,118. The 38 establishments mentioned as having 21 or more workmen, employ 1,737 of these. The number of persons employed in third stories and stories above the third, is 1,407, and they are engaged in the following kinds of work:—Newspapers, tinware, cut sole leather, boots and shoes, photographs, furnaces and stoves, wooden boxes, wool hats, paper boxes, carriages, clothing, leather, watch and clock repairing, painting, bonnets and hats, shoe bows, flannels.

LAWRENCE (page 239). The whole number of establishments tabulated, is 214. The number of these employing 21 persons and upward, is 26, divided among the following industries:—Carpentry, 1; iron work, 2; builders' materials, 1; bread, etc., 1; lumber, 1; paper, 3; worsted goods, 3; steam engines, 1; carriages, 1; bobbins and spools, 1; wood boxes, 1; loom harnesses, 1; shoe machinery, 1; woollen goods, 2; cotton goods, 3; cotton and woollen goods, 2; cotton and worsted goods, 1. The whole number of persons employed, is 12,072. The 26 establishments mentioned as having 21 or more workmen, employ 11,255 of these. The number of persons employed in third stories and stories above the third, is 5,044, and they are engaged in the following kinds of work:—Boots and shoes, bookbinding, furniture, leather belting, wood work, photographs, picture frames, furnaces and stoves, clothing, job printing, steam governors, carriages, ale, files, iron hubbed wheels, card clothing, iron work, worsted goods, loom harnesses, shoe machinery, woollen goods, cotton goods, cotton and woollen goods, paper.

LYNN (page 240). The whole number of establishments tabulated, is 502. The number of these employing 21 persons and upward, is 129, divided among the following industries:—Buildings, 2; boots and shoes, 87; shoe boxes, 1; clothing, 2; shoe trimmings, 1; goat, kid and morocco leather, 9; shoe stock, 1; shoe machinery, 1; furniture, 1; stitching boots and shoes, 24. The whole number of persons employed, is 10,305. The 129 establishments mentioned as having 21 or more workmen, employ 8,122 of these. The number of persons employed in third stories and stories above the third, is 5,513, and they are engaged in the following kinds of work:—Cutting shoe stock, steam and gas fitting, boots and shoes, heeling boots and shoes, stitching boots and shoes, carriages, machine needles, electric machines, job printing, furniture, photographs, stencils and steel letters, coffee and spices, clothing, stoves and furnaces, newspapers, wheels, goat, kid and morocco leather, bookbinding, paper boxes, shoe stock, shoe machinery.

NEWBURYPORT (page 241). The whole number of establishments tabulated, is 140. The number of these employing 21 persons and upward, is 16, divided among the following industries:—Ship building, 3; iron castings, 1; horn combs, 1; boots and shoes, 5; paper boxes, 1; wool hats, 1; cotton goods, 4. The whole number of persons employed, is 2,747. The 16 establishments mentioned as having 21 or more workmen, employ 2,056 of these. The number of persons employed in third stories and stories above the third, is 987, and they are engaged in the following kinds of work:—Photographs, tinware, clothing, sails, newspapers, ale, boots and shoes, paper boxes, wool hats, cotton goods, steam and gas fitting, carpentry, painting, rigging vessels.

SALEM (page 242). The whole number of establishments tabulated, is 446. The number of these employing 21 persons and upward, is 32, divided among the following industries:—Clothing, 3; iron work, 1; shoe stock, 2; boots and shoes, 6; cigars, 1; leather, 10; buildings, 1; white lead, 2; builders' materials, 1; books, 1; railroad equipments, 2; gunny cloth, 1; cotton goods, 1. The whole number of persons employed, is 4,813. The 32 establishments mentioned as having 21 or more workmen, employ 2,784 of these. The number of persons employed in third stories and stories above the third, is 1,138, and they are engaged in the following kinds of work:—Painting, tinsmithing, upholstery, clothing, builders' materials, steam and water regulators, confectionery, coffins and caskets, photographs, shoe stock, jewelry, wagons, boots and shoes, newspapers, leather, white lead, books, railroad equipments, gunny cloth, cotton goods.

HOLYOKE (page 243). The whole number of establishments tabulated, is 27. The number of these employing 21 persons and upward, is 25, divided among the following industries:—Paper, 14; cotton goods, 4; wire goods, 1; woollen goods, 4; screws, 1; turbine water wheels, 1; worsted goods, 1. The whole number of persons employed, is 5,617. The 25 establishments mentioned as having 21 or more workmen, employ 5,601 of these. The number of persons employed in third stories and stories above the third, is 2,647, and they are engaged in the following kinds of work:—Paper, cotton goods, wire goods, woollen goods, screws, turbine water wheels, worsted goods.

SPRINGFIELD (page 244). The whole number of establishments tabulated, is 438. The number of these employing 21 persons and upward, is 63, divided among the following indus-

tries:—Iron goods, 8; bricks, 3; brass goods, 1; drain pipe, 2; gas, 1; railroad equipments, 1; buildings, 7; harnesses, 2; paper boxes, 1; card board and paper, 2; newspapers, 1; clothing, 1; paper collars, 4; builders' materials, 2; gas machines, 1; crackers, 1; children's carriages, 1; cartridges, 1; jewelry, 1; cigars, 2; machine needles, 1; confectionery, 1; envelopes, 2; woollen goods, 1; games, 1; buttons, 2; watch movements, 1; blank books, 2; firearms, 1; cotton goods, 1; blacksmithing, 1; paving, 1; grading, 1; stone cutting, 2; gas fitting, 1; painting, 1. The whole number of persons employed, is 6,667. The 63 establishments mentioned as having 21 or more workmen, employ 4,771 of these. The number of persons employed in third stories and stories above the third, is 2,080, and they are engaged in the following kinds of work:—Photographs, artificial limbs, food preparations, tinware, etc., picture frames, medicines, jewelry, ale, carriages, iron work, paints, coffins, etc., mattresses and beds, trunks, cigars, paper collars and cuffs, builders' materials, paper, cartridges, water gates, machine needles, confectionery, buildings, envelopes, woollen goods, games, buttons, watch movements, blank books, firearms, cotton goods, clothing, gas fitting, job printing, painting, plumbing, cabinet making, electro-plating.

CAMBRIDGE (page 245). The whole number of establishments tabulated, is 334. The number of these employing 21 persons and upward, is 59, divided among the following industries:—Masoning, 2; stone cutting, 2; laundry work, 1; painting, 1; paving, 1; butchering, 1; gas, 1; steam radiators, 1; buildings, 2; monuments and headstones, 1; rolled iron, 1; furniture, 3; oleomargarine, 1; bricks, 6; iron work, 3; books, 4; wood work, 7; brushes, 2; calf-skins, 1; bookbinding, 2; food preparations, 3; boots and shoes, 1; paper collars and cuffs, 1; britannia ware, 1; earthen ware, 1; coffins, 1; organ keys, 1; confectionery, 1; tinware, 1; ice, 2; barrels, 1; glass ware, 1; cabinet organs, 1. The whole number of persons employed, is 6,599. The 59 establishments mentioned as having 21 or more workmen, employ 5,176 of these. The number of persons employed in third stories and stories above the third, is 1,465, and they are engaged in the following kinds of work:—Carpet cleaning, bookbinding, plumbing, tinsmithing, laundry work, painting, furnace registers, steel engraving, piano-fortes, organs, leather, piano actions, job printing, astronomical instruments, carriages, brushes, food preparations, wood work, boots and shoes, furniture, paper collars and cuffs, earthen ware, coffins, buildings, organ keys, confectionery, steam radiators, books, glass ware.

LOWELL (page 246). The whole number of establishments tabulated, is 373. The number of these employing 21 persons and upward, is 72, divided among the following industries:—Woollen goods, 7; worsted goods, 3; carpets, 2; furniture, 3; wood work, 4; iron work, 6; clothing, 4; lumber, 4; job printing, 1; leather, 2; wire goods, 1; buildings, 3; loom harnesses, 1; suspenders, 2; cotton goods, 11; concrete pavement, 1; gas, 1; monuments, etc., 1; boots and shoes, 2; medicines, 1; machinery, 3; cartridges, 1; stone cutting, 2; painting, 2; carpentry, 2; plastering, 2. The whole number of persons employed, is 16,180. The 72 establishments mentioned as having 21 or more workmen, employ 14,566 of these. The number of persons employed in third stories and stories above the third, is 6,530, and they are engaged in the following kinds of work:—Photographing, tinsmithing, carpentry, painting, carriages, iron work, wood work, plumbing, woollen goods, cotton goods, worsted goods, carpets, furniture, machinery, clothing, loom harnesses, job printing, medicines, cartridges, suspenders, wire goods, perfumery, card clothing.

NEWTON (page 247). The whole number of establishments tabulated, is 93. The number of these employing 21 persons and upward, is 13, divided among the following industries:—Masoning, 1; carpentry, 1; buildings, 5; clothing, 1; telegraphic instruments, 1; braided cord, 1; machinery, 1; woollen hosiery and yarn, 1; cotton goods, 1. The whole number of persons employed, is 1,303. The 13 establishments mentioned as having 21 or more workmen, employ 796 of these. The number of persons employed in third stories and stories above the third, is 165, and they are engaged in the following kinds of work:—Brushes, clothing, telegraphic instruments, braided cord, cotton goods, woollen hosiery and yarn.

SOMERVILLE (page 248). The whole number of establishments tabulated, is 115. The number of these employing 21 persons and upward, is 16, divided among the following industries:—Drain building, 2; road building, 1; painting, 1; earthen ware, 1; bricks, 2; iron castings, 1; railroad spikes, 1; brass and copper tubes, 1; pickles, 1; leather, 1; lard, oil, etc., 2; glass ware, 2. The whole number of persons employed, is 1,781. The 16 establishments mentioned as having 21 or more workmen, employ 1,310 of these. The number of persons employed in third stories and stories above the third, is 163, and they are engaged in the following kinds of work:—Mats and matting, lard oil, etc., pickles, leather, fertilizers.

BOSTON (page 249). The whole number of establishments tabulated, is 4,516. The number of these employing 21 persons and upward, is 436, divided among the following industries:—Brass goods, 4; barrels, 1; brooms, 1; butchering, 1; building materials, 4; brushes, 4; britannia ware, 1; boots and shoes, 11; beverages, 12; buildings, 4; bookbinding, 13; beds and bedding, 4; books, 2; blowers, 1; bleaching, 2; chemicals, 1; cork, 1; crockery ware, 1;

carpentry, 15; carriages, 7; confectionery, 7; copper work, 3; cigars, 3; chromos, 2; cotton goods, 2; clothing, 76; dyestuffs, 3; engraving, 10; furs, 2; furniture, 25; food preparations, 12; files, 1; friction matches, 1; furnaces and stoves, 2; floor oil-cloth, 1; fertilizers, 1; gas, 5; gas fixtures, 1; gas fitting, 2; gilding, 1; glass ware, 1; gold leaf, 1; hair goods, 2; heliotype prints, 1; iron work, 37; jute bags, 1; job printing, 16; jewelry, 5; lapidary work, 1; leather, 6; lead, 1; locomotives, 1; machinery, 3; marble goods, 8; metal goods, 1; men's hats, 3; musical instruments, 11; masoning, 2; newspapers, 8; nets and seines, 1; oakum, 1; oil, 3; printing presses, 1; painting, 12; paper goods, 6; printers' materials, 1; plumbers' materials, 2; plumbing, 3; roofing, 1; rope and cordage, 1; rubber goods, 4; railroad equipments, 2; stone cutting, 3; silver ware, 1; sewing-machines, 1; steam engines, 2; suspenders, 1; shoe stock, 1; statuary, 1; steamships, 1; ship trimmings, 1; soda-water apparatus, 1; surgical instruments, 2; soap, 1; sheet music, 1; stereotype plates, 2; steam pumps, 1; tinware, 3; tallow, 3; type, 1; trunks, 2; upholstering, 2; umbrellas, 1; wood work, 10; wire goods, 2; watch cases, 1. The whole number of persons employed, is 46,777. The 436 establishments mentioned as having 21 or more workmen, employ 27,115 of these. The number of persons employed in third stories and stories above the third, is 19,887, and they are engaged in the following kinds of work:—Beverages, buildings, boots and shoes, blacking, britannia ware, books, bookbinding, brass goods, brushes, billard tables, bedding, blowers, bleaching and dyeing, builders' materials, barrels, brooms, cotton goods, carriages, crockery ware, corks, chemicals, carpentry, coffee and spices, clothing, cigars, confectionery, coffins, carving, chromos, cleaning waste, clocks and watches, copper work, curtain fixtures, condiments, coopering, dyestuffs, draughting, drain pipe, extracts, etc., embroidery, engraving, furniture, food preparations, flags and banners, furs, friction matches, gas, glass ware, gilt mouldings, gold and silver leaf, gilding, hardware, hair work, harnesses and saddles, home games, iron work, ink, japanning, jute bags, jewelry, job printing, leather goods, leather, laundry work, locomotives, lithographs, lapidary work, leather dressing, linen hose, machinery, machines, medicines, men's hats, music sheets, musical instruments, novelty goods, newspapers, nets and seines, oakum, oil, photographs, pickles and preserves, plumbing, painting, paper goods, philosophical instruments, printers' materials, paints, patterns and models, roofing, rigging, refining saltpetre, railroad equipments, rubber goods, rope and cordage, refrigerators, rag sorting, razor strops, stone dressing, steam engines, shoe stock, silver ware, sails, stove polish, ship trimmings, stoves and furnaces, silk goods, suspenders, steam pumps, soap, signs, sewing-machines, soda-water apparatus, stereotype plates, trunks, type, upholstering, varnishing, wood work, wire goods, wax flowers, whalebone, white lead, window shades.

CHELSEA (page 250). The whole number of establishments tabulated, is 141. The number of these employing 21 persons and upward, is 16, divided among the following industries:—Bricks, 1; iron castings, 1; granite work, 1; leather, 2; type, 1; cheroots, 2; shoe counters, 1; furniture, 2; oil, 1; elastic webs, 1; stoves, etc., 1; dyeing, 2. The whole number of persons employed, is 1,717. The 16 establishments mentioned as having 21 or more workmen, employ 1,104 of these. The number of persons employed in third stories and stories above the third, is 266, and they are engaged in the following kinds of work:—Cheroots, dressed lumber, elastic webs, furniture, leather, newspapers, oil, organs, refrigerators, stoves, etc.

FITCHBURG (page 251). The whole number of establishments tabulated, is 158. The number of these employing 21 persons and upward, is 30, divided among the following industries:—Buildings, 1; carpentry, 1; cotton goods, 2; furniture, 2; job printing, 1; lumber, 1; machinery, 10; metals and metallic goods, 2; paper, 3; rattan goods, 1; shoes, 1; stone cutting, 1; woollen goods, 4. The whole number of persons employed, is 2,545. The 30 establishments mentioned as having 21 or more workmen, employ 1,063 of these. The number of persons employed in third stories and stories above the third, is 367, and they are engaged in the following kinds of work:—Building materials, carpentry, cotton goods, food preparations, furniture, job printing, lumber, machinery, metals and metallic goods, paper, photographs, rattan goods, shoes, woollen goods.

WORCESTER (page 252). The whole number of establishments tabulated, is 528. The number of these employing 21 persons and upward, is 97, divided among the following industries:—Agricultural implements, 1; buildings, 1; builders' materials, 1; boots and shoes, 22; butchering, 1; carpentry, 1; card clothing, 2; carpets, 1; cigars, 1; clothing, 4; cotton goods, 1; cotton and woollen goods, 5; corsets, 1; envelopes, 1; firearms, 2; furniture, 1; food preparations, 1; gas, 1; ice, 1; iron goods, 9; job printing, 1; leather, 1; machinery, 12; machinists' tools, 4; monuments, etc., 1; organs, 1; organ reeds, 2; paper boxes, 1; packing boxes, 1; picture frames, 1; presses, 1; railroad equipments, 2; shoe lasts, 1; steam engines, 1; wire goods, 2; wooden goods, 1; woollen goods, 5; worsted goods, 1. The whole number of persons employed, is 9,092. The 97 establishments mentioned as having 21 or more workmen, employ 6,966 of these. The number of persons employed in third stories and stories above the third, is 3,543, and they are engaged in the following kinds of work:—Beverages, buildings,

bookbinding, brushes, butchering, builders' materials, boots and shoes, card clothing, carpets, cigars, cotton goods, clothing, coffee and spices, coffins, cotton and woollen goods, carpet making, dyeing and bleaching, draughting, engraving, firearms, food preparations, furniture, iron work, job printing, leather belting, locksmithing, machinery, metals, monuments, musical instruments, paper goods, photographs, plumbing, painting, railroad equipments, razor strops, stoves and furnaces, straw goods, tinsmithing, upholstering, wire goods, wood work, worsted goods, woollen goods.

ADAMS (page 254). The whole number of establishments tabulated, is 119. The number of these employing 21 persons and upward, is 27, divided among the following industries:—Boots and shoes, 7; cotton goods, 11; lime and lime casks, 1; machinery, 1; paper, 2; woollen goods, 5. The whole number of persons employed, is 4,264. The 27 establishments mentioned as having 21 or more workmen, employ 3,802 of these. The number of persons employed in third stories and stories above the third, is 1,173, and they are engaged in the following kinds of work:—Boots and shoes, carriages, cotton goods, food preparations, lumber, paper, painting, plumbing, tinsmithing, woollen goods.

PITTSFIELD (page 255). The whole number of establishments tabulated, is 148. The number of these employing 21 persons and upward, is 14, divided among the following industries:—Buildings, 1; boots and shoes, 2; cotton goods, 3; leather, 1; masoning, 2; painting, 1; woollen goods, 6; wooden goods, 1. The whole number of persons employed, is 1,591. The 14 establishments mentioned as having 21 or more workmen, employ 994 of these. The number of persons employed in third stories and stories above the third, is 332, and they are engaged in the following kinds of work:—Boots and shoes, carpentry, carriages, cotton goods, food preparations, harnesses and saddles, iron work, job printing, leather, photographs, painting, tinsmithing, woollen goods.

ATTLEBOROUGH (page 256). The whole number of establishments tabulated, is 41. The number of these employing 21 persons and upward, is 20, divided among the following industries:—Cotton goods, 1; jewelry, 17; leather, 1; worsted and silk braid, 1. The whole number of persons employed, is 1,241. The 20 establishments mentioned as having 21 or more workmen, employ 1,040 of these. The number of persons employed in third stories and stories above the third, is 330, and they are engaged in the following kinds of work:—Cotton goods, jewelry, leather, worsted and silk braid.

BEVERLY (page 257). The whole number of establishments tabulated, is 26. The number of these employing 21 persons and upward, is 17, and they are all engaged in the manufacture of boots and shoes. The whole number of persons employed, is 1,109. The 17 establishments mentioned as having 21 or more workmen, employ 1,008 of these. The number of persons employed in third stories and stories above the third, is 499, and they are engaged in the manufacture of boots and shoes and morocco leather.

MARBLEHEAD (page 257). The whole number of establishments tabulated, is 28. The number of these employing 21 persons and upward, is 15, and they are all engaged in the manufacture of boots and shoes. The whole number of persons employed, is 1,343. The 15 establishments mentioned as having 21 or more workmen, employ 1,167 of these. The number of persons employed in third stories and stories above the third, is 815, and they are engaged in the manufacture of boots and shoes.

NORTH ANDOVER (page 258). The whole number of establishments tabulated, is 4, all of which employ 21 or more persons. Three of these establishments are devoted to the manufacture of woollen goods and one to machinery and card clothing. The whole number of persons employed, is 774. The number of persons employed in third stories and stories above the third, is 291, and they are engaged in the manufacture of woollen goods and machinery and card clothing.

CHICOPEE (page 259). The whole number of establishments tabulated, is 8 (all of which employ 21 or more persons), divided among the following industries:—Agricultural implements, 2; cabinet locks, etc., 1; cotton goods, 1; firearms, 1; knitting machines, 1; machinery, 1. The whole number of persons employed, is 2,930. The number of persons employed in third stories and stories above the third, is 1,249, and they are engaged in the following kinds of work:—Agricultural implements, cabinet locks, etc., cotton goods, firearms, knitting machines, machinery.

NORTHAMPTON (page 259). The whole number of establishments tabulated, is 7 (all of which employ 21 or more persons), divided among the following industries:—Baskets, 1; buttons, 2; cotton goods, 1; cutlery, 1; hardware, 1; sewing machines, 1. The whole number of persons employed, is 762. The number of persons employed in third stories and stories above the third, is 80, and they are engaged in the following kinds of work:—Buttons, cotton goods, cutlery, sewing machines.

MALDEN (page 260). The whole number of establishments tabulated, is 9. The number of these employing 21 persons and upward, is 4, divided among the following industries:—Lasts and boot trees, 1; leather 2; rubber goods, 1. The whole number of persons employed, is 812. The 4 establishments mentioned as having 21 or more workmen, employ 740 of these. The number of persons employed in third stories and stories above the third, is 405, and they are engaged in the following kinds of work:—Emery and sand paper, leather, lasts and boot trees, rubber goods.

MARLBOROUGH (page 261). The whole number of establishments tabulated, is 17. The number of these employing 21 persons and upward, is 16, and they are all engaged in the manufacture of boots and shoes. The whole number of persons employed, is 2,331. The 16 establishments mentioned as having 21 or more workmen, employ 2,313 of these. The number of persons employed in third stories and stories above the third, is 1,219, and they are all engaged in the manufacture of boots and shoes.

NATICK (page 261). The whole number of establishments tabulated, is 14. The number of these employing 21 persons and upward, is 8. Seven of these establishments manufacture boots and shoes, and one manufactures wool hats. The whole number of persons employed, is 676. The 8 establishments mentioned as having 21 or more workmen, employ 578 of these. The number of persons employed in third stories and stories above the third, is 288, and they are all engaged in the manufacture of boots and shoes.

STONEHAM (page 262). The whole number of establishments tabulated, is 25. The number of these employing 21 persons and upward, is 19, divided among the following industries:—Boots and shoes, 16; leather, 2; shoe stock, 1. The whole number of persons employed, is 1,304. The 19 establishments mentioned as having 21 or more workmen, employ 1,216 of these. The number of persons employed in third stories and stories above the third, is 758, and they are engaged in the following kinds of work:—Boots and shoes, leather, shoe boxes, shoe stock.

WALTHAM (page 263). The whole number of establishments tabulated, is 8. The number of these employing 21 persons and upward, is 3, one being engaged in bleaching and dyeing, one in the manufacture of cotton goods, and one in the manufacture of watches. The whole number of persons employed, is 2,018. The 3 establishments mentioned as having 21 or more workmen, employ 1,949 of these. The number of persons employed in third stories and stories above the third, is 431, and they are engaged in bleaching and dyeing, the manufacture of cotton goods and of watches.

WOBURN (page 263). The whole number of establishments tabulated, is 29. The number of these employing 21 persons and upward, is 19, divided among the following industries:—Boots and shoes, 1; leather, 15; shoe stock, 3. The whole number of persons employed, is 1,117. The 19 establishments mentioned as having 21 or more workmen, employ 995 of these. The number of persons employed in third stories and stories above the third, is 440, and they are engaged in the following kinds of work:—Leather, machinery, shoe stock.

WEYMOUTH (page 264). The whole number of establishments tabulated, is 41. The number of these employing 21 persons and upward, is 25, divided among the following industries:—Boots and shoes, 23; cut nails, 1; fertilizers, 1. The whole number of persons employed, is 1,553. The 25 establishments mentioned as having 21 or more workmen, employ 1,344 of these. The number of persons employed in third stories and stories above the third, is 631, and they are engaged in the manufacture of boots and shoes and fertilizers.

BROCKTON (page 265). The whole number of establishments tabulated, is 38. The number of these employing 21 persons and upward, is 32, divided among the following industries:—Boots and shoes, 29; furniture, 1; sewing-machine needles, 2. The whole number of persons employed, is 2,591. The 32 establishments mentioned as having 21 or more workmen, employ 2,507 of these. The number of persons employed in third stories and stories above the third, is 1,587, and they are engaged in the following kinds of work:—Boots and shoes, furniture, sewing-machine needles.

BLACKSTONE (page 265). The whole number of establishments tabulated, is 9. The number of these employing 21 persons and upward, is 6, divided among the following industries:—Cotton goods, 1; flocks, 1; woollen goods, 4. The whole number of persons employed, is 1,299. The 6 establishments mentioned as having 21 or more workmen, employ 1,251 of these. The number of persons employed in third stories and stories above the third, is 583, and they are engaged in the following kinds of work:—Cotton goods, flocks, woollen goods.

MILFORD (page 266). The whole number of establishments tabulated, is 28. The number of these employing 21 persons and upward, is 18, divided among the following industries:—Boots and shoes, 13; boot heels, 1; frame spindles, 1; machinery, 3. The whole number of persons employed, is 1,304. The 18 establishments mentioned as having 21 or more workmen, employ 1,173 of these. The number of persons employed in third stories and stories above

the third, is 656, and they are engaged in the following kinds of work:—Boots and shoes, builders' finish, machinery, sewing-machine needles, shoe nails.

MILLBURY (page 267). The whole number of establishments tabulated, is 13, divided among the following industries:—Cotton goods, 6; hosiery, 1; woollen goods, 6. Each of these establishments employs 21 or more persons. The whole number of persons employed, is 1,118. The number of persons employed in third stories and stories above the third, is 298, and they are engaged in the following kinds of work:—Cotton goods, hosiery, woollen goods.

SOUTHBRIDGE (page 268). The whole number of establishments tabulated, is 7, divided among the following industries:—Cotton goods, 2; cotton and woollen goods, 1; calico printing, 1; printing reps and delaines, 1; shuttles, 1; spectacles, 1. Each of these establishments employs 21 or more persons. The whole number of persons employed, is 1,641. The number of persons employed in third stories and stories above the third, is 571, and they are engaged in the following kinds of work:—Cotton goods, cotton and woollen goods, printing reps and delaines, spectacles.

WESTBOROUGH (page 268). The whole number of establishments tabulated, is 5. The number of these employing 21 persons and upward, is 4, divided among the following industries:—Boots and shoes, 2; straw bonnets and hats, 2. The whole number of persons employed, is 921. The 4 establishments mentioned as having 21 or more workmen, employ 906 of these. The number of persons employed in third stories and stories above the third, is 604, and they are engaged in the following kinds of work:—Boots and shoes, sleighs, straw bonnets and hats.

RECAPITULATIONS.

The tables previously given for the nineteen cities and twenty-one towns contain information, both of a general and detail nature. Each city or town showing supplies the material for a chart or plan, upon which, if constructed, we could see at a glance the location of the workmen in the various stories and the means provided for their safe exit, in case of fire or panic. The local details and comparisons, we necessarily leave for the consideration of those best acquainted with and most interested in them, either personally or officially. With the general points of information, we can readily form suggestive state recapitulations, which also enable us to institute comparisons between the various cities and towns as regards persons employed in the different stories, the average number of persons employed in establishments, the height of buildings and the means of escape by stairways and fire escapes. We also append tables which show the direction in which the outside doors of manufacturing establishments open, and the number of buildings having one story, two stories, etc.

The first tabular recapitulation which we present shows the number of establishments considered in the nineteen cities and twenty-one towns and the number of persons employed in each story of the buildings in which they are employed.

RECAPITULATION I.—*Persons Employed in each Story.*

CITIES AND TOWNS.	No. of Es. tablish'ts.	PERSONS EMPLOYED IN EACH STORY.									Totals.
		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.	
CITIES.											
Fall River,	241	4,707	4,349	2,747	2,101	1,915	775	–	–	–	16,594
New Bedford,	242	1,767	1,289	916	523	147	–	–	–	–	4,642
Taunton,	134	1,638	1,163	588	167	12	–	–	–	–	3,568
Gloucester,	105	460	189	22	–	–	–	–	–	–	671
Haverhill,	317	802	909	751	523	133	–	–	–	–	3,118
Lawrence,	214	3,651	3,377	2,340	1,350	458	468	336	92	–	12,072
Lynn,	502	2,216	2,576	2,682	1,663	1,029	139	–	–	–	10,305
Newburyport,	140	1,028	741	640	222	82	34	–	–	–	2,747
Salem,	446	2,424	1,251	738	212	170	18	–	–	–	4,813
Holyoke,	27	1,389	1,581	1,350	865	319	113	–	–	–	5,617
Springfield,	438	3,306	1,281	1,122	604	201	153	–	–	–	6,667
Cambridge,	344	3,645	1,489	796	570	99	10	–	–	–	6,609
Lowell,	373	5,559	4,085	3,216	1,454	1,263	503	100	–	–	16,180
Newton,	93	888	250	87	78	–	–	–	–	–	1,303
Somerville,	115	1,390	228	104	40	19	–	–	–	–	1,781
Boston,	4,516	17,968	8,922	8,949	6,446	3,356	1,084	13	20	19	46,777
Chelsea,	141	1,109	342	217	49	–	–	–	–	–	1,717
Fitchburg,	158	1,471	707	325	42	–	–	–	–	–	2,545
Worcester,	528	3,517	2,032	2,045	1,046	452	–	–	–	–	9,092
Totals,	9,074	58,935	36,761	29,635	17,955	9,655	3,297	449	112	19	156,818
TOWNS.											
Adams,	119	1,437	1,654	800	370	3	–	–	–	–	4,264
Pittsfield,	148	736	523	241	87	4	–	–	–	–	1,591
Attleborough,	41	440	471	245	46	39	–	–	–	–	1,241
Beverly,	26	195	415	409	90	–	–	–	–	–	1,109
Marblehead,	28	74	454	528	287	–	–	–	–	–	1,343
North Andover,	4	256	227	179	107	5	–	–	–	–	774
Chicopee,	8	755	926	594	341	314	–	–	–	–	2,930
Northampton,	7	336	346	57	23	–	–	–	–	–	762
Malden,	9	225	182	374	31	–	–	–	–	–	812
Marlborough,	17	384	728	779	344	96	–	–	–	–	2,331
Natick,	14	161	227	191	97	–	–	–	–	–	676
Stoneham,	25	240	306	453	305	–	–	–	–	–	1,304
Waltham,	8	908	679	285	123	23	–	–	–	–	2,018
Woburn,	29	305	372	369	41	30	–	–	–	–	1,117
Weymouth,	41	426	496	360	261	10	–	–	–	–	1,553
Brockton,	38	559	438	797	637	160	–	–	–	–	2,591
Blackstone,	9	277	439	194	160	123	106	–	–	–	1,299
Milford,	28	322	326	232	295	129	–	–	–	–	1,304
Millbury,	13	419	401	195	103	–	–	–	–	–	1,118
Southbridge,	7	520	550	361	151	59	–	–	–	–	1,641
Westborough,	5	152	165	300	260	44	–	–	–	–	921
Totals,	624	9,127	10,325	7,943	4,159	1,039	106	–	–	–	32,699
AGGREGATES.											
Cities,	9,074	58,935	36,761	29,635	17,955	9,655	3,297	449	112	19	156,818
Towns,	624	9,127	10,325	7,943	4,159	1,039	106	–	–	–	32,699
Totals,	9,698	68,062	47,086	37,578	22,114	10,694	3,403	449	112	19	189,517

It will be seen that the persons employed in the 9,698 establishments considered, number about 190,000. The whole number of employés in mechanical and manufacturing industries in the forty cities and towns is given, by the manufacturers, as about 215,000. The whole number for the State, from the same source of information, is about 308,000. Thus, the returns which we give cover 88+ per cent of the persons employed in the towns tabulated, and 70 per cent of all

employed in manufactures in the State. The 9,698 establishments form 43+ per cent of those in the State engaged in manufactures. The average number of persons employed in each establishment of the 9,698, is 19+. For the balance of the establishments in the State, the average is only 7+.

The 190,000 employés are at work in stories numbering from the first to the ninth. The figures plainly indicate the distribution by stories, but we present the percentages as being more easily used or remembered.

In first story, .	. 35 + per cent.	In fifth story, . .	5 + per cent.
In second story,	. 24 + per cent.	In sixth story, and	
In third story, .	. 19 + per cent.	above, . . .	2 + per cent.
In fourth story,	. 11 + per cent.		

The percentage employed in the third story or below, is about 80, or, in other words, 152,000 employés out of 190,000 are obliged to descend but two flights of stairs to reach the ground.

Recapitulations II. and III., which follow, are intimately related. The first gives a classification of size of establishments, the size being determined by the number of employés. The second shows the number of persons employed with regard to this size classification.

RECAPITULATION II.—*Persons Employed in each Establishment.*

CITIES AND TOWNS.	NUMBER OF ESTABLISHMENTS EMPLOYING—					Whole number of Establishments.
	5 or less persons.	6 to 20 persons.	21 to 100 persons.	101 to 300 persons.	Over 300 persons.	
CITIES.						
Fall River,	129	62	21	16	22	241
New Bedford,	135	80	19	6	2	242
Taunton,	67	46	13	5	3	134
Gloucester,	67	33	5	–	–	105
Haverhill,	190	89	36	2	–	317
Lawrence,	137	51	18	2	6	214
Lynn,	216	157	109	20	–	502
Newburyport,	82	42	9	6	1	140
Salem,	294	120	27	4	1	446
Holyoke,	–	1	9	13	4	27
Springfield,	243	132	54	6	3	438
Cambridge,	197	88	44	13	2	344
Lowell,	198	103	64	9	9	373
Newton,	44	36	10	3	–	93
Somerville,	73	26	13	2	1	115
Boston,	2,907	1,173	379	52	5	4,516
Chelsea,	76	49	13	3	–	141
Fitchburg,	95	33	26	4	–	158
Worcester,	313	118	81	15	1	528
Totals,	5,404	2,439	940	181.	60	9,074

Recapitulation II.—Concluded.

Cities and Towns.	Number of Establishments Employing—					Whole number of Establishments.
	5 or less persons.	6 to 20 persons.	21 to 100 persons.	101 to 300 persons.	Over 300 persons.	
Towns.						
Adams,	63	29	13	12	2	119
Pittsfield,	102	32	9	5	-	148
Attleborough,	6	15	17	3	-	41
Beverly,	-	9	16	1	-	26
Marblehead,	-	13	14	1	-	28
North Andover,	-	-	3	-	1	4
Chicopee,	-	-	5	1	2	8
Northampton,	-	-	4	3	-	7
Malden,	-	5	3	-	1	9
Marlborough,	-	1	4	11	1	17
Natick,	-	6	7	1	-	14
Stoneham,	-	6	15	4	-	25
Waltham,	-	5	-	1	2	8
Woburn,	-	10	17	2	-	29
Weymouth,	-	16	21	4	-	41
Brockton,	-	6	26	5	1	38
Blackstone,	-	3	3	2	1	9
Milford,	-	10	13	5	-	28
Millbury,	-	-	8	5	-	13
Southbridge,	-	-	2	4	1	7
Westborough,	-	1	1	2	1	5
Totals,	171	167	201	72	13	624
Aggregates.						
Cities,	5,454	2,439	940	181	60	9,074
Towns,	171	167	201	72	13	624
Totals,	5,625	2,606	1,141	253	73	9,698

Recapitulation III.—*Persons Employed as regards Size of Establishment.*

Cities and Towns.	Employed in Establishments having—					Whole No. of persons employed.
	5 or less persons.	6 to 20 persons.	21 to 100 persons.	101 to 300 persons.	Over 300 persons.	
Cities.						
Fall River,	264	673	927	3,139	11,591	16,594
New Bedford,	395	789	744	731	1,983	4,642
Taunton,	171	571	740	836	1,250	3,568
Gloucester,	174	304	193	-	-	671
Haverhill,	483	898	1,395	342	-	3,118
Lawrence,	306	511	888	355	10,012	12,072
Lynn	526	1,657	4,480	3,642	-	10,305
Newburyport,	222	469	501	1,205	350	2,747
Salem,	749	1,280	949	500	1,335	4,813
Holyoke	-	16	583	2,363	2,655	5,617
Springfield,	618	1,378	2,228	914	1,529	6,667
Cambridge,	474	949	1,915	2,568	703	6,609
Lowell,	503	1,111	2,193	1,647	10,726	16,180
Newton,	130	377	348	448	-	1,303
Somerville,	184	287	619	341	350	1,781
Boston,	6,943	12,719	16,445	8,437	2,233	46,777
Chelsea,	212	491	532	572	-	1,717
Fitchburg,	246	376	1,188	775	-	2,545
Worcester,	810	1,316	3,770	2,514	682	9,092
Totals,	13,410	26,042	40,638	31,329	45,399	156,818

RECAPITULATION III.—Concluded.

CITIES AND TOWNS.	EMPLOYED IN ESTABLISHMENTS HAVING—					Whole No. of persons employed.
	5 or less persons.	6 to 20 persons.	21 to 100 persons.	101 to 300 persons.	Over 300 persons.	
TOWNS.						
Adams,	168	294	757	2,000	1,045	4,264
Pittsfield,	258	339	307	687	–	1,591
Attleborough,	21	171	690	359	–	1,241
Beverly,	–	101	858	150	–	1,109
Marblehead,	–	176	820	347	–	1,343
North Andover,	–	–	254	–	520	774
Chicopee,	–	–	259	275	2,396	2,930
Northampton,	–	–	304	458	–	762
Malden,	–	72	201	–	539	812
Marlborough,	–	18	255	1,568	490	2,331
Natick,	–	98	461	117	–	676
Stoneham,	–	88	646	570	–	1,304
Waltham,	–	69	–	195	1,754	2,018
Woburn,	–	122	693	302	–	1,117
Weymouth,	–	209	802	542	–	1,553
Brockton,	–	84	1,272	860	375	2,591
Blackstone,	–	48	100	368	783	1,299
Milford,	–	131	485	688	–	1,304
Millbury,	–	–	535	583	–	1,118
Southbridge,	–	–	116	716	809	1,641
Westborough,	–	15	68	316	522	921
Totals,	447	2,035	9,883	11,101	9,233	32,699
AGGREGATES.						
Cities,	13,410	26,042	40,638	31,329	45,399	156,818
Towns,	447	2,035	9,883	11,101	9,233	32,699
Totals,	13,857	28,077	50,521	42,430	54,632	189,517

The town and city details in these tables may be condensed into the following summary in which the tabular basis of classification, 5 and under, 6 to 20, etc., is retained.

5,625 establishments employ	13,857 persons.	Average in each,	2 +
2,606 establishments employ	28,077 persons.	Average in each,	10 +
1,141 establishments employ	50,521 persons.	Average in each,	44 +
253 establishments employ	42,420 persons.	Average in each,	167 +
73 establishments employ	54,632 persons.	Average in each,	748 +
9,698 establishments employ	189,507 persons.	Average (the State),	19 +

Recapitulation IV. shows the height of buildings in which the 190,000 employés are at work.

RECAPITULATION IV.—*Height of Buildings, and Persons Employed.*

CITIES AND TOWNS.	PERSONS EMPLOYED IN BUILDINGS HAVING—									Whole number employed.
	1 story.	2 stories.	3 stories.	4 stories.	5 stories.	6 stories.	7 stories.	8 stories.	9 stories.	
CITIES.										
Fall River,	966	847	129	1,455	6,567	6,630	–	–	–	16,594
New Bedford,	698	798	874	772	1,500	–	–	–	–	4,642
Taunton,	485	995	826	1,136	126	–	–	–	–	3,568
Gloucester,	364	249	58	–	–	–	–	–	–	671
Haverhill,	546	659	713	854	346	–	–	–	–	3,118
Lawrence,	494	599	507	214	1,667	633	5,983	1,975	–	12,072
Lynn,	919	1,700	2,202	2,505	2,729	250	–	–	–	10,305
Newburyport,	584	413	454	425	521	350	–	–	–	2,747
Salem,	1,188	959	1,012	98	1,406	150	–	–	–	4,813
Holyoke,	–	189	1,229	1,352	1,565	1,282	–	–	–	5,617
Springfield,	2,556	884	952	1,172	246	1,057	–	–	–	6,667
Cambridge,	2,379	955	1,046	1,476	743	10	–	–	–	6,609
Lowell,	1,653	1,079	1,422	655	2,761	7,795	815	–	–	16,180
Newton,	530	370	74	329	–	–	–	–	–	1,303
Somerville,	1,083	193	326	–	179	–	–	–	–	1,781
Boston,	11,497	8,280	9,141	8,244	5,936	3,528	9	–	142	46,777
Chelsea,	551	497	171	498	–	–	–	–	–	1,717
Fitchburg,	541	910	878	216	–	–	–	–	–	2,545
Worcester,	1,319	912	2,164	2,297	2,250	150	–	–	–	9,092
Totals,	28,153	21,488	24,178	23,698	28,542	21,835	6,807	1,975	142	156,818
TOWNS.										
Adams,	204	315	1,470	2,105	170	–	–	–	–	4,264
Pittsfield,	368	324	350	420	129	–	–	–	–	1,591
Attleborough,	196	496	372	–	177	–	–	–	–	1,241
Beverly,	40	180	617	272	–	–	–	–	–	1,109
Marblehead,	–	306	437	600	–	–	–	–	–	1,343
North Andover,	–	–	–	697	77	–	–	–	–	774
Chicopee,	–	50	395	89	2,396	–	–	–	–	2,930
Northampton,	–	468	140	154	–	–	–	–	–	762
Malden,	14	39	70	689	–	–	–	–	–	812
Marlborough,	–	18	170	1,378	765	–	–	–	–	2,331
Natick,	–	131	135	410	–	–	–	–	–	676
Stoneham,	25	7	495	777	–	–	–	–	–	1,304
Waltham,	20	49	945	–	1,004	–	–	–	–	2,018
Woburn,	17	159	308	331	302	–	–	–	–	1,117
Weymouth,	191	196	446	680	40	–	–	–	–	1,553
Brockton,	–	82	540	1,594	375	–	–	–	–	2,591
Blackstone,	–	65	37	414	783	–	–	–	–	1,299
Milford,	8	142	166	408	580	–	–	–	–	1,304
Millbury,	–	100	115	903	–	–	–	–	–	1,118
Southbridge,	–	246	133	453	809	–	–	–	–	1,641
Westborough,	–	–	203	–	718	–	–	–	–	921
Totals,	1,083	3,373	7,544	12,374	8,325	–	–	–	–	32,699
AGGREGATES.										
Cities,	28,153	21,488	24,178	23,698	28,542	21,835	6,807	1,975	142	156,818
Towns,	1,083	3,373	7,544	12,374	8,325	–	–	–	–	32,699
Totals,	29,236	24,861	31,722	36,072	36,867	21,835	6,807	1,975	142	189,517

If we compare the results of this recapitulation with those of Recapitulation I., we secure the following statement:—

Employed in one story b'ld'gs, 29,236	Working in first story of all b'ld'gs, 68,062
Employed in two story b ldg's, 24,861	Working in second story of all b'ld'gs, 47,086
Employed in three story b'ld'gs, 31,722	Working in third story of all b'ld'gs, 37,578
Employed in four story b'ld'gs, 36,072	Working in fourth story of all b'ld'gs, 22,114
Employed in five story b'ld'gs, 36,867	Working in fifth story of all b'ld'gs, 10,694
Employed in six story b'ld'gs, 21,835	Working in sixth story of all b'ld'gs, 3,403

Employed in seven story b'ld'gs,	6,807	Working in seventh story of all b'ld'gs,	449
Employed in eight story b'ld'gs,	1,975	Working in eighth story of all b'ld'gs,	112
Employed in nine story b'ld'gs,	142	Working in ninth story of all b'ld'gs,	19

The above is easily understood when it is remembered that although persons may be employed in five-story buildings, they may perform their labor in the first or second stories of such buildings. The statement plainly shows the concentration of workmen in the lower stories of the buildings in which they are employed.

Recapitulation V. gives in detail the means of escape from the second story and those stories above the second in the forty cities and towns. The average number of persons depending upon each stairway or fire escape as a means of exit, is shown for each story.

RECAPITULATION V.—*Means of Escape.* (*2d story and above*).

CITIES AND TOWNS.	Persons employed.	MEANS OF ESCAPE. Stairways.	Fire escapes.	Stairways and fire escapes.	Average No. of persons to each stairway and fire escape.
Cities.					
FALL RIVER.					
2d story,	4,349	89	29	118	37
3d story,	2,747	73	34	107	25
4th story,	2,101	59	39	98	21
5th story,	1,915	54	33	87	22
6th story,	775	20	12	32	24
Totals,	11,887	295	147	442	27
NEW BEDFORD.					
2d story,	1,289	107	6	113	11
3d story,	916	29	4	33	28
4th story,	523	6	2	8	65
5th story,	147	1	1	2	73
Totals,	2,875	143	13	156	18
TAUNTON.					
2d story,	1,163	69	6	75	16
3d story,	588	22	6	28	21
4th story,	167	6	4	10	17
5th story,	12	1	1	2	6
Totals,	1,930	98	17	115	17
GLOUCESTER.					
2d story,	189	31	–	31	6
3d story,	22	5	–	5	4
Totals,	211	36	–	36	6
HAVERHILL.					
2d story,	909	138	1	139	7
3d story,	751	79	1	80	9
4th story,	523	29	–	29	18
5th story,	133	6	–	6	22
Totals,	2,316	252	2	254	9

RECAPITULATION V.—Continued.

CITIES AND TOWNS.	Persons employed.	MEANS OF ESCAPE.			Average No. of persons to each stairway and fire escape.
		Stairways.	Fire escapes.	Stairways and fire escapes.	
LAWRENCE.					
2d story,	3,377	68	11	79	43
3d story,	2,340	41	9	50	47
4th story,	1,350	17	9	26	52
5th story,	458	10	6	16	29
6th story,	468	8	4	12	39
7th story,	336	7	3	10	34
8th story,	92	1	1	2	46
Totals,	8,421	152	43	195	43
LYNN.					
2d story,	2,576	244	–	244	11
3d story,	2,682	160	–	160	17
4th story,	1,663	62	–	62	27
5th story,	1,029	24	–	24	43
6th story,	139	1	–	1	139
Totals,	8,089	491	–	491	16
NEWBURYPORT.					
2d story,	741	46	5	51	15
3d story,	640	25	4	29	22
4th story,	222	5	4	9	25
5th story,	82	3	3	6	14
6th story,	34	1	1	2	17
Totals,	1,719	80	17	97	18
SALEM.					
2d story,	1,251	165	4	169	7
3d story,	738	64	2	66	11
4th story,	212	10	2	12	18
5th story,	170	3	1	4	42
6th story,	18	1	1	2	9
Totals,	2,389	243	10	253	9
HOLYOKE.					
2d story,	1,581	26	21	47	34
3d story,	1,350	22	19	41	33
4th story,	865	16	13	29	30
5th story,	319	9	6	15	21
6th story,	113	1	1	2	56
Totals,	4,228	74	60	134	32
SPRINGFIELD.					
2d story,	1,281	131	4	135	10
3d story,	1,122	74	4	78	14
4th story,	604	26	5	31	19
5th story,	201	7	1	8	25
6th story,	153	5	1	6	25
Totals,	3,361	243	15	258	13
CAMBRIDGE					
2d story,	1,489	110	6	116	13
3d story,	796	49	5	54	15
4th story,	570	25	4	29	20
5th story,	99	4	1	5	20
6th story,	10	1	1	2	5
Totals,	2,964	189	17	206	14

RECAPITULATION V.—Continued.

CITIES AND TOWNS.	Persons employed.	MEANS OF ESCAPE.			Average No. of persons to each stairway and fire escape.
		Stairways.	Fire escapes.	Stairways and fire escapes.	
LOWELL.					
2d story,	4,085	160	18	178	23
3d story,	3,216	80	15	95	34
4th story,	1,454	26	13	39	37
5th story,	1,263	11	11	22	57
6th story,	503	7	6	13	39
7th story,	100	2	2	4	22
Totals,	10,621	286	65	351	30
NEWTON.					
2d story,	250	16	3	19	13
3d story,	87	6	1	7	12
4th story,	78	4	2	6	13
Totals,	415	26	6	32	13
SOMERVILLE.					
2d story,	228	28	1	29	8
3d story,	104	7	1	8	13
4th story,	40	1	1	2	20
5th story,	19	1	–	1	19
Totals,	391	37	3	40	10
BOSTON.					
2d story,	8,922	1,244	34	1,278	7
3d story,	8,949	834	34	868	10
4th story,	6,446	515	18	533	12
5th story,	3,356	186	14	200	16
6th story,	1,084	50	7	57	19
7th story,	13	3	–	3	4
8th story,	20	1	–	1	20
9th story,	19	1	–	1	19
Totals,	28,809	2,834	107	2,941	10
CHELSEA.					
2d story,	342	53	1	54	6
3d story,	217	16	1	17	13
4th story,	49	5	1	6	8
Totals,	608	74	3	77	8
FITCHBURG.					
2d story,	707	60	3	63	11
3d story,	325	34	3	37	9
4th story,	42	4	2	6	7
Totals,	1,074	98	8	106	10
WORCESTER.					
2d story,	2,032	204	8	212	10
3d story,	2,045	183	9	192	11
4th story,	1,046	72	6	78	13
5th story,	452	22	2	24	19
Totals,	5,575	481	25	506	11

RECAPITULATION V.—Continued.

CITIES AND TOWNS.	Persons employed.	MEANS OF ESCAPE. Stairways.	Fire escapes.	Stairways and fire escapes.	Average No. of persons to each stairway and fire escape.
TOWNS.					
ADAMS.					
2d story,	1,054	67	7	74	22
3d story,	800	39	8	47	17
4th story,	370	13	5	18	21
5th story,	3	1	1	2	1
Totals,	2,827	120	21	141	20
PITTSFIELD.					
2d story,	523	49	5	54	10
3d story,	241	21	6	27	9
4th story,	87	4	2	6	14
5th story,	4	1	–	1	4
Totals,	855	75	13	88	10
ATTLEBOROUGH.					
2d story,	471	24	4	28	17
3d story,	245	11	3	14	17
4th story,	46	2	2	4	11
5th story,	39	2	2	4	10
Totals,	801	39	11	50	16
BEVERLY.					
2d story,	415	24	–	24	17
3d story,	409	16	–	16	26
4th story,	90	3	–	3	30
Totals,	914	43	–	43	21
MARBLEHEAD.					
2d story,	454	23	–	23	20
3d story,	528	17	–	17	31
4th story,	287	7	–	7	41
Totals,	1,269	47	–	47	27
NORTH ANDOVER.					
2d story,	227	4	4	8	28
3d story,	179	5	5	10	18
4th story,	107	4	4	8	13
5th story,	5	1	1	2	2
Totals,	518	14	14	28	19
CHICOPEE.					
2d story,	926	19	6	25	37
3d story,	594	16	5	21	28
4th story,	341	10	4	14	24
5th story,	314	8	2	10	31
Totals,	2,175	53	17	70	31
NORTHAMPTON.					
2d story,	346	8	3	11	31
3d story,	57	4	1	5	11
4th story,	23	3	1	4	6
Totals,	426	15	5	20	21

RECAPITULATION V.—Continued.

CITIES AND TOWNS.	Persons employed.	MEANS OF ESCAPE. Stairways.	Fire escapes.	Stairways and fire escapes.	Average No. of persons to each stairway and fire escape.
MALDEN.					
2d story,	182	10	2	12	15
3d story,	374	7	2	9	42
4th story,	31	4	1	5	6
Totals,	587	21	5	26	23
MARLBOROUGH.					
2d story,	728	24	1	25	29
3d story,	779	21	–	21	37
4th story,	344	17	1	18	19
5th story,	96	8	–	3	32
Totals,	1,947	65	2	67	29
NATICK.					
2d story,	227	12	–	12	19
3d story,	191	10	1	11	17
4th story,	97	6	–	6	16
Totals,	515	28	1	29	18
STONEHAM.					
2d story,	306	25	–	25	12
3d story,	453	12	–	12	38
4th story,	305	12	–	12	25
Totals,	1,064	49	–	49	22
WALTHAM.					
2d story,	679	17	1	18	38
3d story,	285	6	2	8	36
4th story,	123	2	1	3	41
5th story,	23	2	2	4	6
Totals,	1,110	27	6	33	34
WOBURN.					
2d story,	372	34	2	36	10
3d story,	369	27	1	28	13
4th story,	41	12	–	12	3
5th story,	30	3	–	3	10
Totals,	812	76	3	79	10
WEYMOUTH.					
2d story,	496	40	1	41	12
3d story,	360	29	1	30	12
4th story,	261	13	–	13	20
5th story,	10	1	–	1	10
Totals,	1,127	83	2	85	13
BROCKTON.					
2d story,	438	42	1	43	10
3d story,	797	37	1	38	21
4th story,	637	22	1	23	28
5th story,	160	1	–	1	160
Totals,	2,032	102	3	105	19

RECAPITULATION V.—Concluded.

CITIES AND TOWNS.	Persons employed.	MEANS OF ESCAPE.			Average No. of persons to each stairway and fire escape.
		Stairways.	Fire escapes.	Stairways and fire escapes.	
BLACKSTONE.					
2d story,	439	8	3	11	40
3d story,	194	6	3	9	21
4th story,	160	4	3	7	23
5th story,	123	1	1	2	61
6th story,	106	1	1	2	53
Totals,	1,022	20	11	31	33
MILFORD.					
2d story,	326	33	1	34	10
3d story,	232	26	3	29	8
4th story,	295	16	-	16	18
5th story,	129	5	-	5	26
Totals,	982	80	4	84	12
MILLBURY.					
2d story,	401	14	11	25	16
3d story,	195	13	11	24	8
4th story,	103	11	7	18	6
Totals,	699	38	29	67	10
SOUTHBRIDGE.					
2d story,	550	9	5	14	39
3d story,	361	5	3	8	45
4th story,	151	3	3	6	25
5th story,	59	1	1	2	29
Totals,	1,121	18	12	30	37
WESTBOROUGH.					
2d story,	165	5	-	5	33
3d story,	300	5	-	5	60
4th story,	260	2	-	2	130
5th story,	44	2	-	2	22
Totals,	769	14	-	14	55

This table gives an easily understood showing of the stories in which persons are employed, and their means of escape in case of fire or panic. The averages of persons to each means of escape have a comparative value, for each city and town has been dealt with in the same manner. It is impossible for us to fix an arbitrary figure which shall denote the proper number of stairways or fire escapes for a given number of employés. We give the facts as they are. Thorough inspection of each establishment, and full knowledge of the subject, will be required before it can be definitely and truthfully stated that the condition shown is a very bad, bad, fair, good or very good

one, all things considered. Certain salient points are, however, plainly noticeable. The fourth and fifth stories in New Bedford are manifestly overcrowded. The sixth stories in Lynn and Holyoke; the fifth in Lowell and Brockton; the fifth and sixth in Blackstone, and the fourth in Westborough, seem to be in a similar condition. The average to each stairway and fire escape in Lawrence seems large, but it should be borne in mind that there is a great difference in fire escapes, some being far more serviceable than others. The number of fire escapes in Fall River is proportionately large. The proportion is less in Lawrence, and large again in Holyoke. In North Andover each stairway is matched with a fire escape. This would seem to be the theoretically correct state of affairs, for, in case of fire or panic, if the stairs become impassable, the fire escapes are the only means left and should be capable of furnishing a chance of exit for all. It will be noticed that Lynn has no fire escapes, although large numbers of workmen are employed in the upper stories. The general condition of Boston, Millbury and Worcester seems remarkably good. Deductions from and remarks upon these city and town showings could be greatly extended, but it seems unnecessary. To secure the safety of the employés in any manufacturing establishment, as regards means of escape in case of fire or panic, such establishment must be taken by itself and the problem solved for it. Uniform requirements will not suit in dissimilar cases, and the true value of laws looking to the end considered, would be found in their intelligent and practical adaptation and execution rather than in any enforced conformity to an arbitrary, but doubtless theoretically correct standard; and, while a law should be so framed as to point out the theoretically correct standard, discretionary power should be given to those charged with the execution of the law by which they would be enabled to consider the specific requirements of each establishment.

We present next a summary for the State, showing the whole number of stairways and fire escapes by stories, and the average number to each means of escape in the cities, in the towns and in both combined.

Means of Escape, by Stories; for the State.

STORIES.	STAIRWAYS.			FIRE ESCAPES.			AVG. NO. OF PERSONS TO EACH STAIRWAY AND FIRE ESCAPE.		
	Cities.	Towns.	Cities and Towns.	Cities.	Towns.	Cities and Towns.	Cities.	Towns.	Cities and Towns.
Second, . .	2,989	491	3,480	161	57	218	12	19	13
Third, . .	1,803	333	2,136	152	56	208	15	20	16
Fourth, . .	888	170	1,058	125	35	160	18	20	18
Fifth, . .	342	32	374	80	10	90	23	25	23
Sixth, . .	95	1	96	34	1	35	25	53	26
Seventh, .	12	–	12	5	–	5	26	–	26
Eighth, . .	2	–	2	1	–	1	37	–	37
Ninth, . .	1	–	1	–	–	–	19	–	19
Totals, .	6,132	1,027	7,159	558	159	717	14	20	15

A comparison of this table with the city and town presentations will show what cities and towns are above or below the State average. In the cities we find one fire escape to about ten stairways; in the towns one fire escape to about six stairways, and in both cities and towns one fire escape to about ten stairways. It will be seen that the number of persons to each means of escape grows larger from story to story as we go up higher, which is just what should *not* be the case. This is undoubtedly owing to the fact that in all kinds of business the heavy machines requiring few attendants are put in the lower stories, while the light and small machines with the greatest number of employés are in the upper stories. This state of affairs, with our present knowledge of building, is a necessity, and can only be palliated, for a radical change is impossible.

DOORS.

A tabulation of the returns of the 9,698 establishments in the previously mentioned 19 cities and 21 towns, as regards the opening of outside doors discloses the fact that the great majority swing inwardly. Those opening outwardly number but 175; those sliding, 78; those having either outwardly opening or sliding doors, in part, number 146. By this latter statement, we mean that in the case of the 146, some of their outside doors also swing inwardly. The balance reporting state that the outside doors swing inwardly. There can be no valid reason for doubting the existence of this state of affairs, or for not considering that in case of fire or panic serious

consequences are likely to follow. With recent disasters so fresh in the public mind, there would seem to be need of no more investigation or argument to cause the passage of laws which will secure a desirable uniformity in the manner of the opening of doors toward the outside. In this case, at least, an arbitrary law is the kind needed to secure one well recognized and easily attainable condition of safety.

Height of Buildings; Attics, Basements, Etc.

From a tabulation of the same city and town returns that have furnished the basis for all that has preceded, we derive the following exhibit:—

Height of Buildings used as Manufactories; Attics, Basements, Etc.

STORIES.	Number of Buildings.	With Attics.	With Basements.	With both Attics and Basements.
One Story Buildings.				
In cities,	1,340	1	9	1
In towns,	267	–	6	1
Totals,	1,607	1	15	2
One and a half Story Buildings.				
In cities,	62	–	–	–
In towns,	23	–	1	–
Totals,	85	–	1	–
Two Story Buildings.				
In cities,	1,042	22	39	3
In towns,	383	10	16	4
Totals,	1,425	32	55	7
Two and a half Story Buildings.				
In cities,	73	2	3	–
In towns,	19	–	1	–
Totals,	92	2	4	–
Three Story Buildings.				
In cities,	749	34	63	4
In towns,	243	23	28	7
Totals,	992	57	91	11
Three and a half Story Buildings.				
In cities,	25	–	–	–
In towns,	5	–	–	–
Totals,	30	–	–	–
Four Story Buildings.				
In cities,	658	21	108	12
In towns,	163	19	23	17
Totals,	821	40	131	29

Height of Buildings, Etc.—Concluded.

STORIES.	Number of Buildings.	With Attics.	With Basements.	With both Attics and Basements.
Four and a half Story Buildings.				
In cities,	12	–	–	–
In towns,	3	–	–	–
Totals,	15	–	–	–
Five Story Buildings.				
In cities,	389	15	105	8
In towns,	39	2	5	12
Totals,	428	17	110	20
Six Story Buildings.				
In cities,	97	4	10	3
In towns,	2	–	–	–
Totals,	99	4	10	3
Seven Story Buildings.				
In cities,	14	1	2	–
In towns,	2	–	–	–
Totals,	16	1	2	–
Eight Story Buildings.				
In cities,	2	1	1	–
In towns,	–	–	–	–
Totals,	2	1	1	–
Nine Story Buildings.				
In cities,	1	–	–	–
In towns,	–	–	–	–
Totals,	1	–	–	–

These 5,613 buildings contained the 9,698 establishments, and the 190,000 employés. In the large cities, especially, several firms occupy the same building. We find that but 2.7 per cent of the buildings have attics; 7.4 per cent have basements, and a trifle over 1 per cent both attics and basements.

In view of the facts presented herewith in regard to the stories in which persons are employed, and their means of escape in case of fire or other danger, and in view also of past investigations made by this Bureau in relation to manufacturing establishments, we feel more than ever the necessity of enacting laws which shall provide for securely guarding the belting and exposed shafting, gearing and drums in manufactories; which shall prohibit the cleaning of machinery while in motion; which shall provide that elevators shall be

made thoroughly safe, and that all such establishments shall be well supplied with stairways and fire escapes, and with doors swinging outwardly; which shall require ample apparatus for extinguishing fires in each building, and that all male employés shall be organized into fire parties and trained in its use; which shall prohibit the constant employment of persons in attic rooms; which shall require that all rooms and their appurtenances shall be well ventilated and kept clean; and, finally, that ample provision shall be made for carrying into effect the provisions of such laws by establishing sufficient penalties to prevent their evasion or violation, and by the appointment of proper executive officers.

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